

Type of crane	BGL-Group 2125-0125
Kind of crane	Tower crane with trolley jib, top-slewing, self-climbing
Installation	stationary or travelling
Calculation base	DIN 15018-H1/B3 DIN 15020-1AM
Loadmoment	max. 1541 KNM


PLANING DIAGRAM

WOLFF 5520.6

962-3-020902E

2.2.1.1

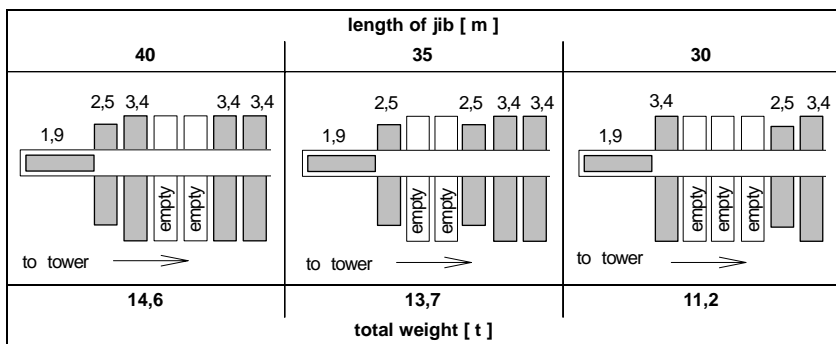
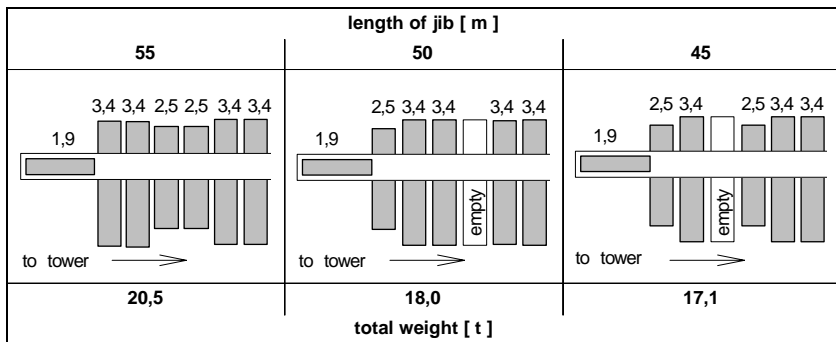
Load capacity table

radius [m]		25	30	35	40	45	50	55			
length of jib [m]	55	2,5 - 22,9	 6,0	5,4	4,4	3,6	3,1	2,6	2,3	2,0	load capacity [t]
	50	2,5 - 24,2		5,8	4,6	3,9	3,3	2,8	2,5		
	45	2,5 - 24,4		5,8	4,7	3,9	3,3	2,9			
	40	2,5 - 24,6		5,9	4,78	4,0	3,4				
	35	2,5 - 24,9		5,9	4,8	4,0					
	30	2,5 - 25,7		6,0	5,0						

The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,368 kg per meter hook path).


Arrangement of counterweights Hw 628 FU

Hw 628 FU



2.2.1.2

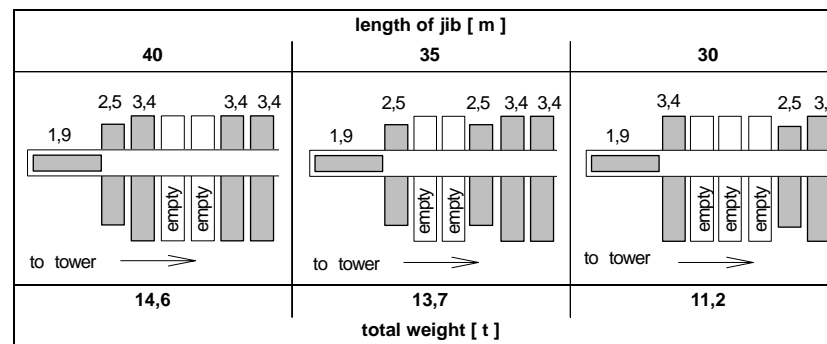
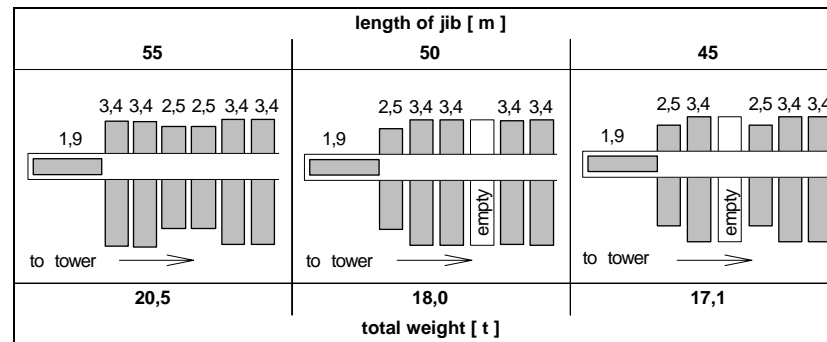
Load capacity table

radius [m]		25	30	35	40	45	50	55			
length of jib [m]	55	2,5 - 25,3	 6,0	6,0	4,9	4,1	3,5	3,0	2,7	2,4	load capacity [t]
	50	2,5 - 26,5		6,0	5,2	4,4	3,7	3,2	2,8		
	45	2,5 - 26,6		6,0	5,2	4,4	3,7	3,2			
	40	2,5 - 26,7		6,0	5,3	4,4	3,8				
	35	2,5 - 26,8		6,0	5,3	4,4					
	30	2,5 - 27,6		6,0	5,4						

The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,368 kg per meter hook path).


Arrangement of counterweights Hw 628 FU

Hw 628 FU



2.2.1.3

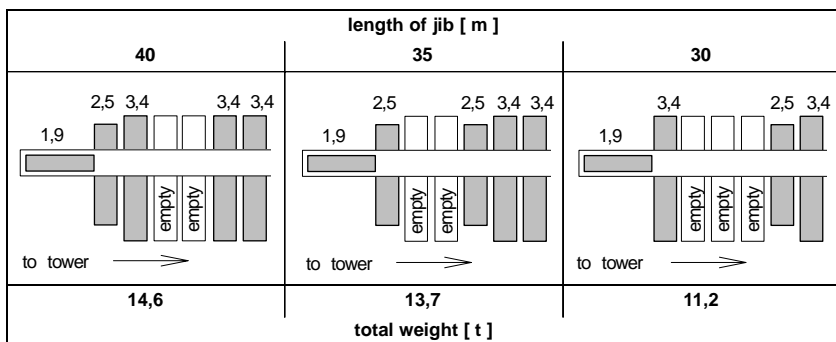
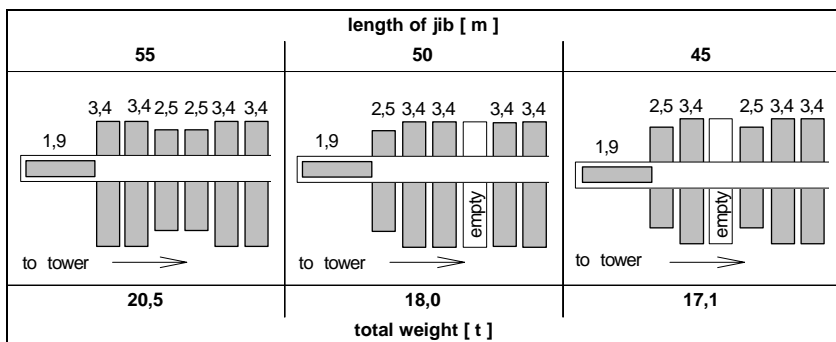
Load capacity table

radius [m]			25	30	35	40	45	50	55		
length of jib [m]	55	2,5 - 22,9	 6,0	5,4	4,4	3,6	3,1	2,6	2,3	2,0	load capacity [t]
	50	2,5 - 24,2		5,8	4,6	3,9	3,3	2,8	2,5		
	45	2,5 - 24,4		5,8	4,7	3,9	3,3	2,9			
	40	2,5 - 24,6		5,9	4,8	4,0	3,4				
	35	2,5 - 24,9		5,9	4,8	4,0					
	30	2,5 - 25,7		6,0	5,0						

The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,368 kg per meter hook path).


Arrangement of counterweights

Hw 637 FU



2.2.1.4

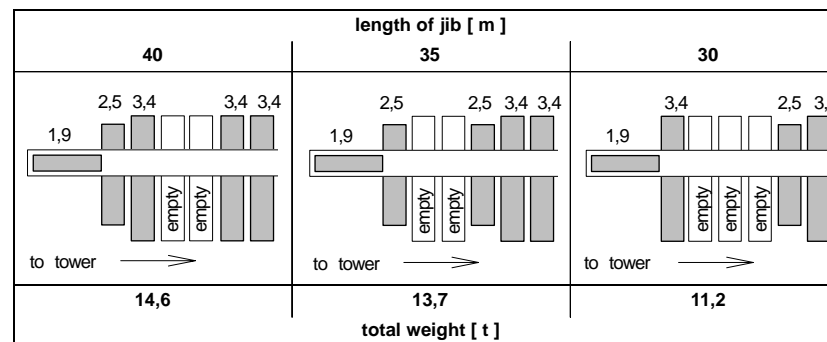
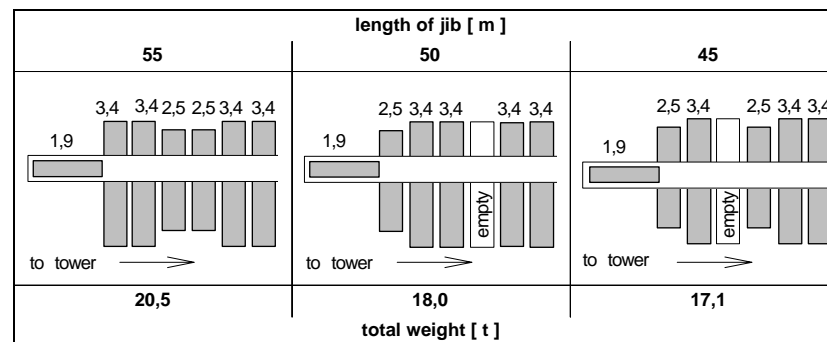
Load capacity table

radius [m]			25	30	35	40	45	50	55		
length of jib [m]	55	2,5 - 25,3	 6,0	6,0	4,9	4,1	3,5	3,0	2,7	2,4	load capacity [t]
	50	2,5 - 26,5		6,0	5,2	4,4	3,7	3,2	2,8		
	45	2,5 - 26,6		6,0	5,2	3,94	3,7	3,2			
	40	2,5 - 26,7		6,0	5,3	4,4	3,8				
	35	2,5 - 26,8		6,0	5,3	4,0					
	30	2,5 - 27,6		6,0	5,4						



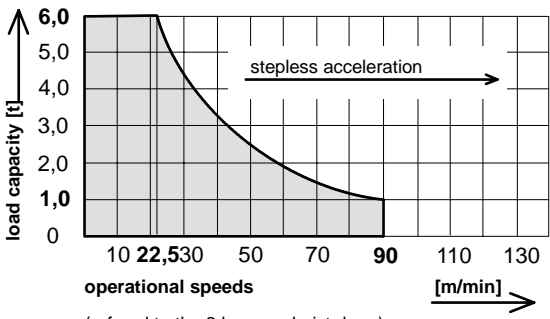

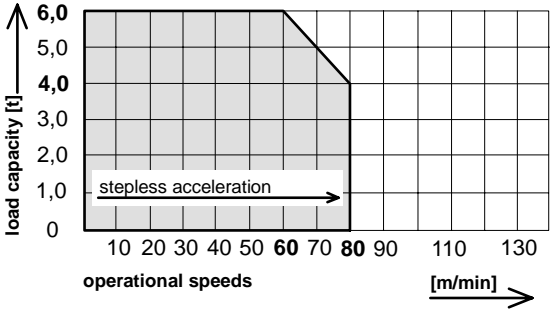

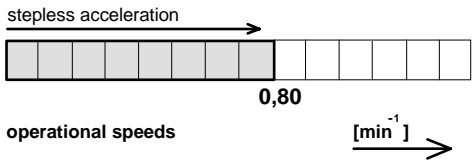
The load capacities refer to a hook path of 42,0 m. With greater hook paths the safe working load will be minimized by the additional weight of the hoisting cable (with 2 fall operation = 2,368 kg per meter hook path).

Arrangement of counterweights



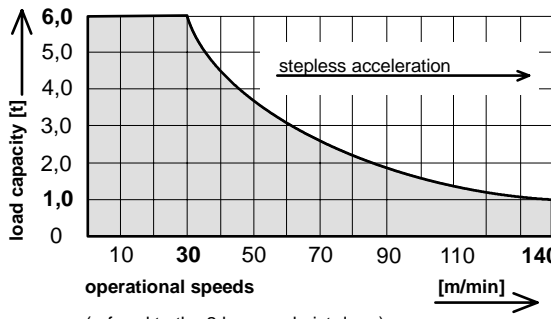

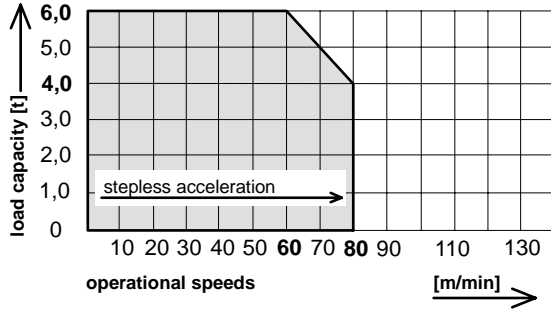

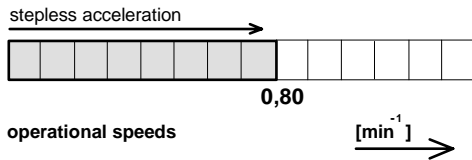
Hw 637 FU



2.2.2.1 Operational speeds 400 V, 50 Hz

drive [type]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 628 FU	hoisting 	190	28	46,0 total output for a simultaneity factor 0,8
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p> <p>(referred to the 2 layer on hoist drum)</p>			
Kw	traversing		4,0	
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p>			
Dw	slewing 0,8 min ⁻¹		7,5	
	 <p>operational speeds [min⁻¹]</p>			

2.2.2.2 Operational speeds 400 V, 50 Hz

drive [type]	operational speeds load capacity [2-fall operation]	max. lift [m]	output [kW]	total output [kVA]
Hw 637 FU	hoisting 	190	37	52,0 total output for a simultaneity factor 0,8
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p> <p>(referred to the 2 layer on hoist drum)</p>			
Kw	traversing		4,0	
	 <p>load capacity [t]</p> <p>operational speeds [m/min]</p>			
Dw	slewing 0,8 min ⁻¹		7,5	
	 <p>operational speeds [min⁻¹]</p>			

2.2.3 Load capacity [kg] Data given in distances of meters DIN 15018 / H1 - B3

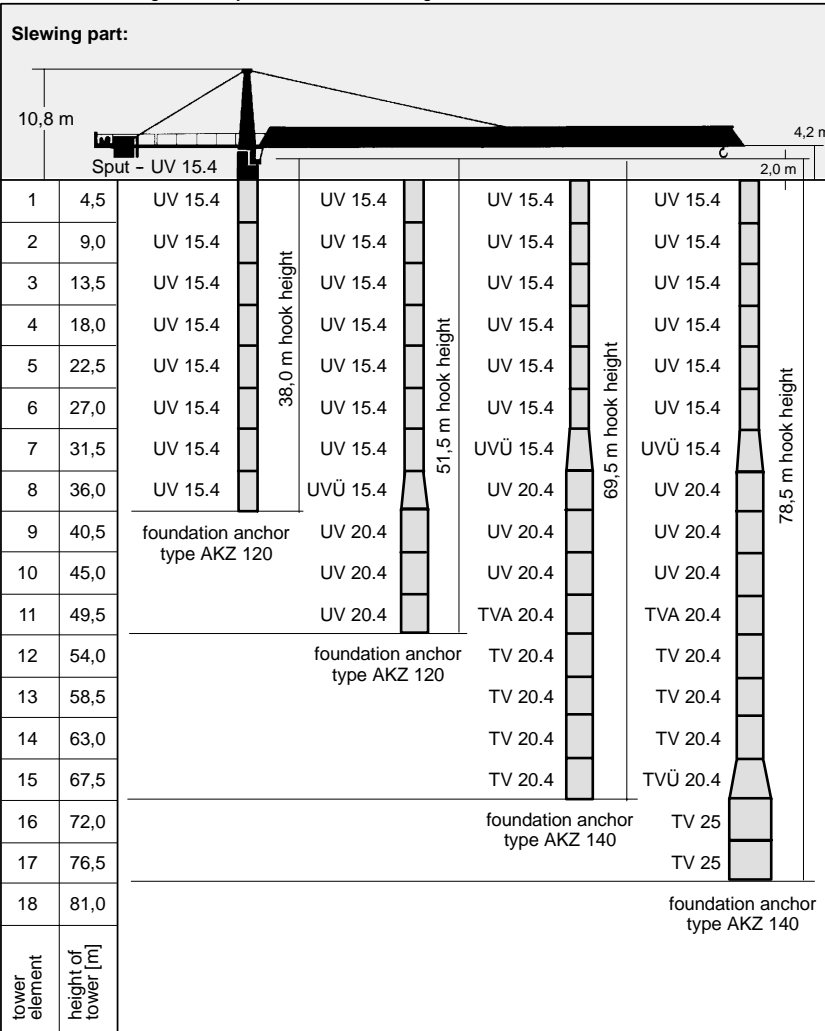
radius [m]	length of jib [m]					
	30	35	40	45	50	55
18,0	6000	6000	6000	6000	6000	6000
19,0	6000	6000	6000	6000	6000	6000
20,0	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000
23,0	6000	6000	6000	6000	6000	5980
24,0	6000	6000	6000	6000	6000	5690
25,0	6000	5900	5900	5800	5800	5400
26,0	5920	5700	5640	5580	5510	5180
27,0	5660	5460	5390	5330	5270	4950
28,0	5420	5230	5170	5110	5050	4740
29,0	5200	5010	4960	4900	4840	4540
30,0	5000	4800	4800	4700	4600	4400
31,0		4630	4580	4520	4470	4190
32,0		4460	4400	4350	4300	4030
33,0		4300	4240	4200	4140	3880
34,0		4140	4090	4050	4000	3740
35,0		4000	4000	3900	3900	3600
36,0			3820	3770	3730	3490
37,0			3690	3650	3600	3370
38,0			3570	3530	3490	3260
39,0			3460	3420	3370	3160
40,0			3400	3300	3300	3100
41,0				3210	3170	2960
42,0				3110	3070	2870
43,0				3020	2980	2780
44,0				2930	2900	2700
45,0				2900	2800	2600
46,0	the load capacities to a range of lift 42,0 m				2730	2550
47,0					2660	2480
48,0					2590	2410
49,0					2520	2340
50,0					2500	2300
51,0						2220
52,0						2160
53,0						2110
54,0						2050
55,0						2000

2.2.3.2 Load capacity [kg] - Data given in distances of meters DIN 15018 / H1 - B3

Ausladung [m]	Auslegerlänge [m]					
	30	35	40	45	50	55
18,0	6000	6000	6000	6000	6000	6000
19,0	6000	6000	6000	6000	6000	6000
20,0	6000	6000	6000	6000	6000	6000
21,0	6000	6000	6000	6000	6000	6000
22,0	6000	6000	6000	6000	6000	6000
23,0	6000	6000	6000	6000	6000	6000
24,0	6000	6000	6000	6000	6000	6000
25,0	6000	6000	6000	6000	6000	6000
26,0	6000	6000	6000	6000	6000	5820
27,0	6000	5950	5920	5900	5870	5580
28,0	5890	5710	5690	5660	5630	5350
29,0	5660	5490	5460	5440	5410	5140
30,0	5500	5300	5300	5200	5200	4900
31,0		5090	5060	5040	5010	4760
32,0		4910	4880	4860	4830	4590
33,0		4730	4710	4690	4660	4430
34,0		4570	4550	4530	4510	4270
35,0		4400	4400	4400	4400	4100
36,0			4250	4230	4210	3990
37,0			4110	4100	4080	3870
38,0			3990	3970	3950	3740
39,0			3870	3850	3830	3630
40,0			3800	3700	3700	3500
41,0				3630	3610	3420
42,0				3520	3500	3320
43,0				3420	3400	3220
44,0				3330	3310	3130
45,0				3200	3200	3000
46,0	the load capacities to a range of lift 42,0 m				3130	2960
47,0					3050	2880
48,0					2970	2810
49,0					2900	2730
50,0					2800	2700
51,0						2600
52,0						2530
53,0						2470
54,0						2410
55,0						2400

2.2.6.1 Tower configurations

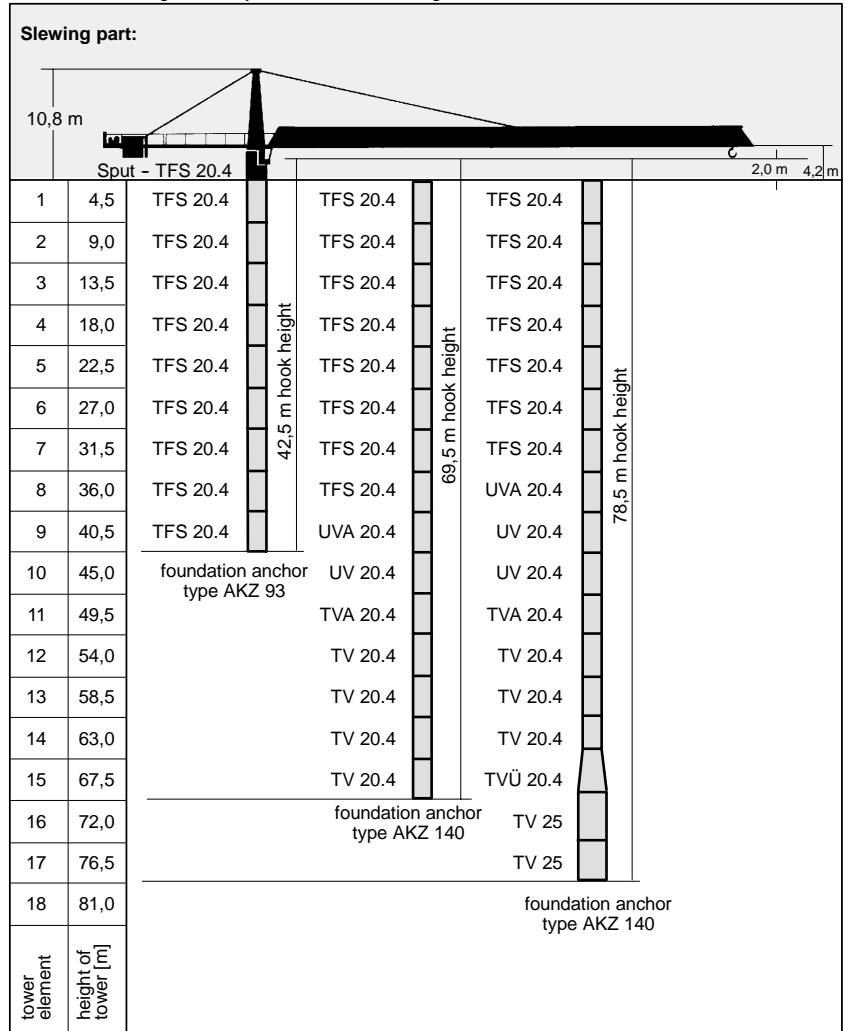
for a free standing stationary crane without climbing device on a concrete foundation.



For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.6.2 Tower configurations

for a free standing stationary crane without climbing device on a concrete foundation.

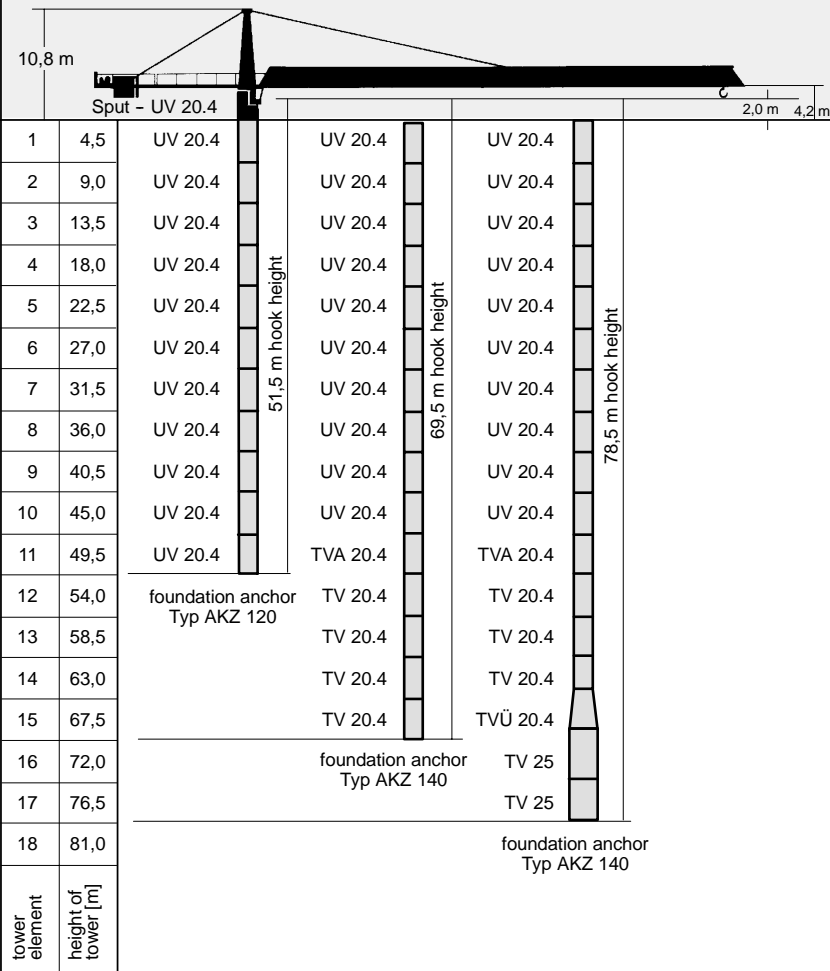


For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.6.3 Tower configurations

for a free standing stationary crane without climbing device on a concrete foundation.

Slewing part:

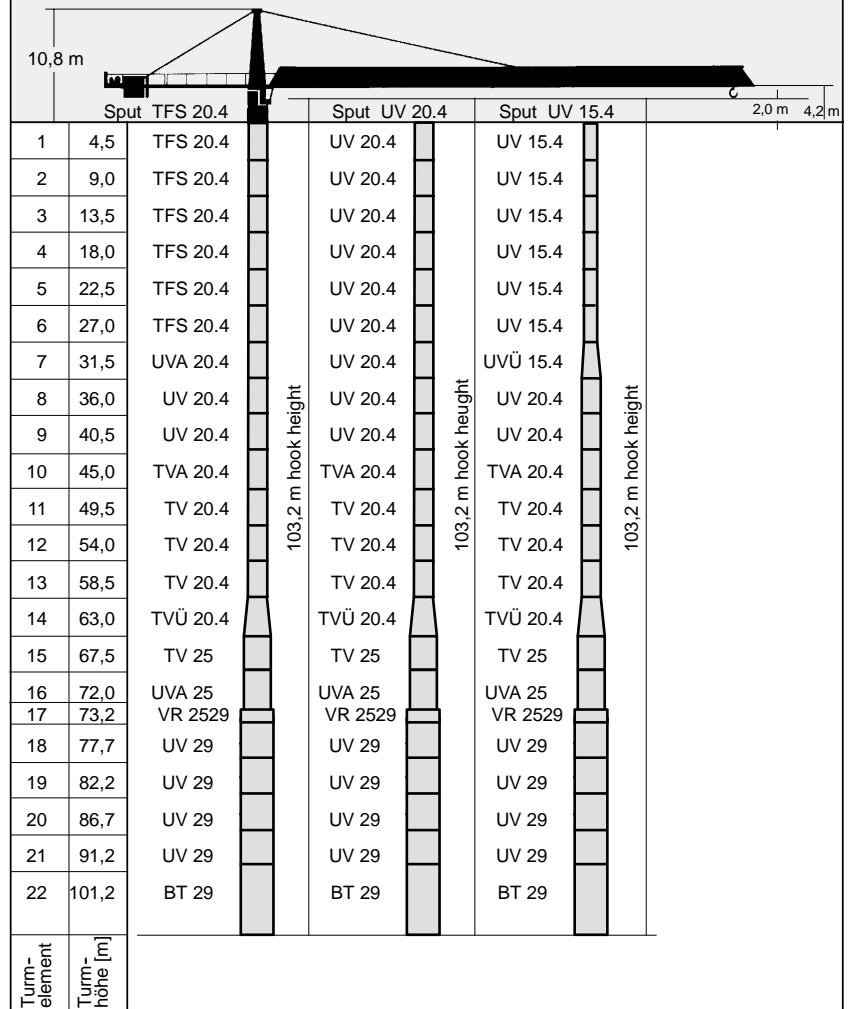


For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.6.4 Tower configurations

for a free standing stationary crane without climbing device on a concrete foundation.

Slewing part:

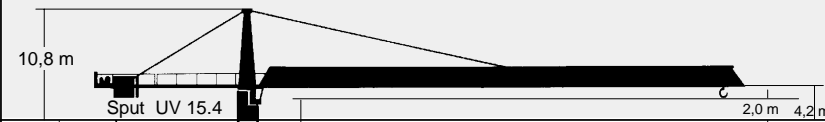


For data regarding foundation anchors see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.7.1 Tower configurations

for a free standing stationary crane without climbing device on a cross frame.

Slewing part:



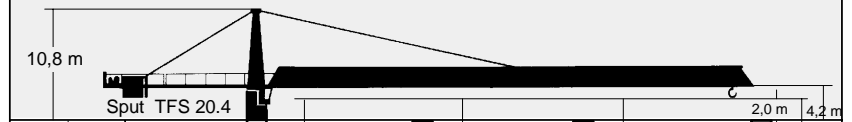
1	4,5	UV 15.4	34,3 m hook height
2	9,0	UV 15.4	
3	13,5	UV 15.4	
4	18,0	UV 15.4	
5	22,5	UV 15.4	
6	27,0	UV 15.4	
7	31,5	UV 15.4	
8	36,0	0,8 m KR 7 - 32 connection TFS 15/UV 15	75,2 m hook height
9	40,5		
10	45,0		
11	49,5		
12	54,0		
13	58,5		
14	63,0		
15	67,5		
16	72,0		
17	76,5		
18	81,0		
tower element	height of tower [m]		

For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.7.1 Tower configurations

for a free standing stationary crane without climbing device on a cross frame.

Slewing part:



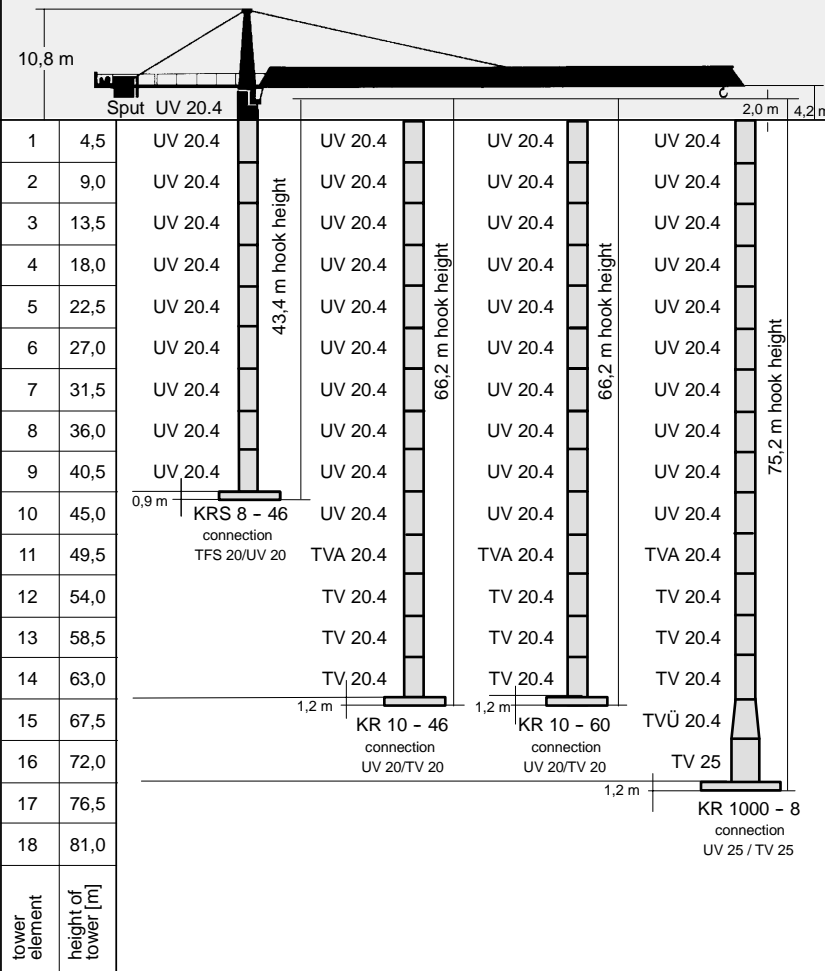
1	4,5	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	75,2 m hook height
2	9,0	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
3	13,5	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
4	18,0	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
5	22,5	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
6	27,0	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
7	31,5	TFS 20.4	TFS 20.4	TFS 20.4	TFS 20.4	
8	36,0	TFS 20.4	TFS 20.4	TFS 20.4	UVA 20.4	
9	40,5	TFS 20.4	UVA 20.4	UVA 20.4	UV 20.4	
10	45,0	0,9 m KRS 8 - 46 connection TFS 20/UV 20	UV 20.4	UV 20.4	UV 20.4	
11	49,5		TVA 20.4	TVA 20.4	TVA 20.4	
12	54,0		TV 20.4	TV 20.4	TV 20.4	
13	58,5		TV 20.4	TV 20.4	TV 20.4	
14	63,0		TV 20.4	TV 20.4	TV 20.4	
15	67,5		1,2 m KR 10 - 46 connection UV 20/TV 20	1,2 m KR 10 - 60 connection UV 20/TV 20	TVÜ 20.4	
16	72,0				TV 25	
17	76,5				1,2 m KR 1000 - 8 connection UV 25 / TV 25	
18	81,0					
tower element	height of tower [m]					

For data regarding cross frames see section 12.
The tower configurations are recommended for economic crane installation and may be used in any case.
Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.7.2 Tower configurations

for a free standing stationary crane without climbing device on a cross frame.

Slewing part:

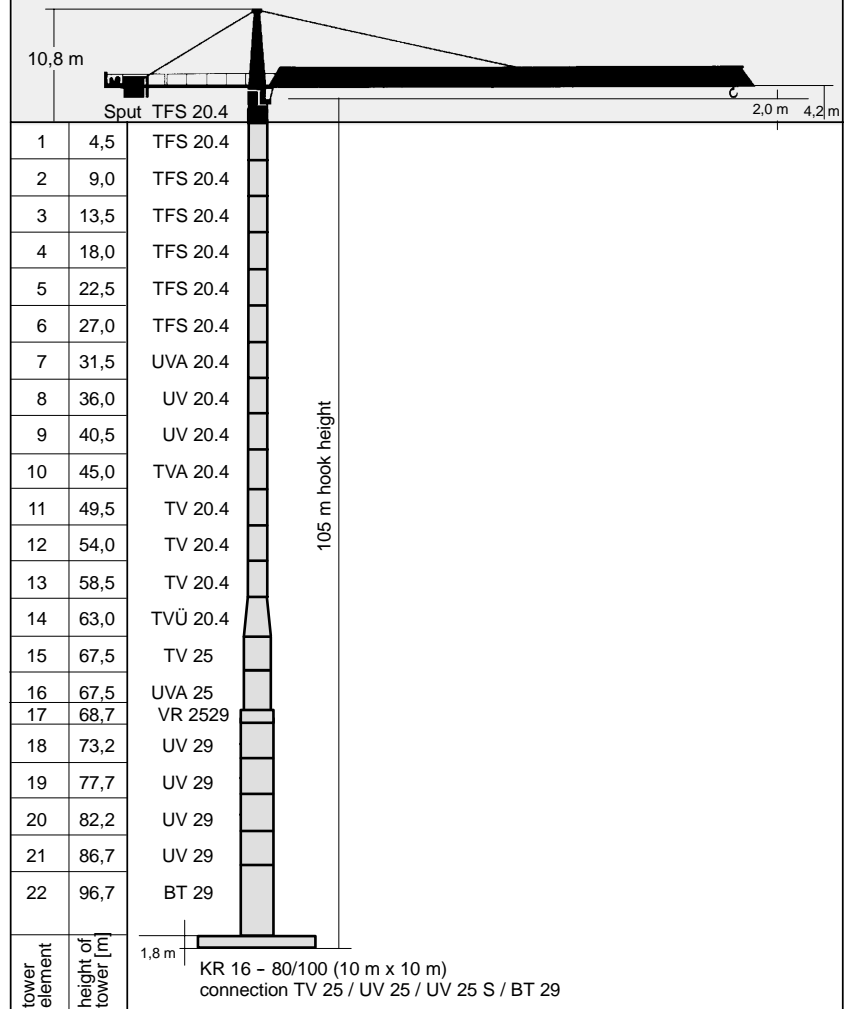


For data regarding cross frames see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.7.3 Tower configurations

for a free standing stationary crane without climbing device on a cross frame.

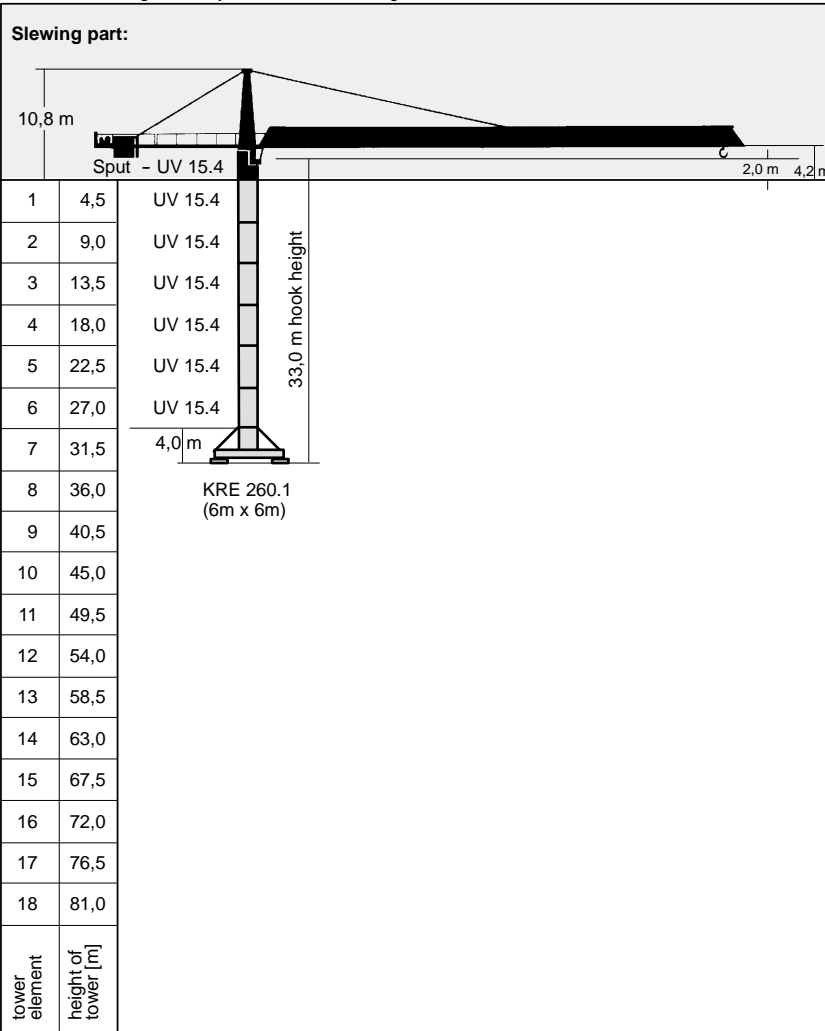
Slewing part:



For data regarding cross frames see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.8.1 Tower configurations

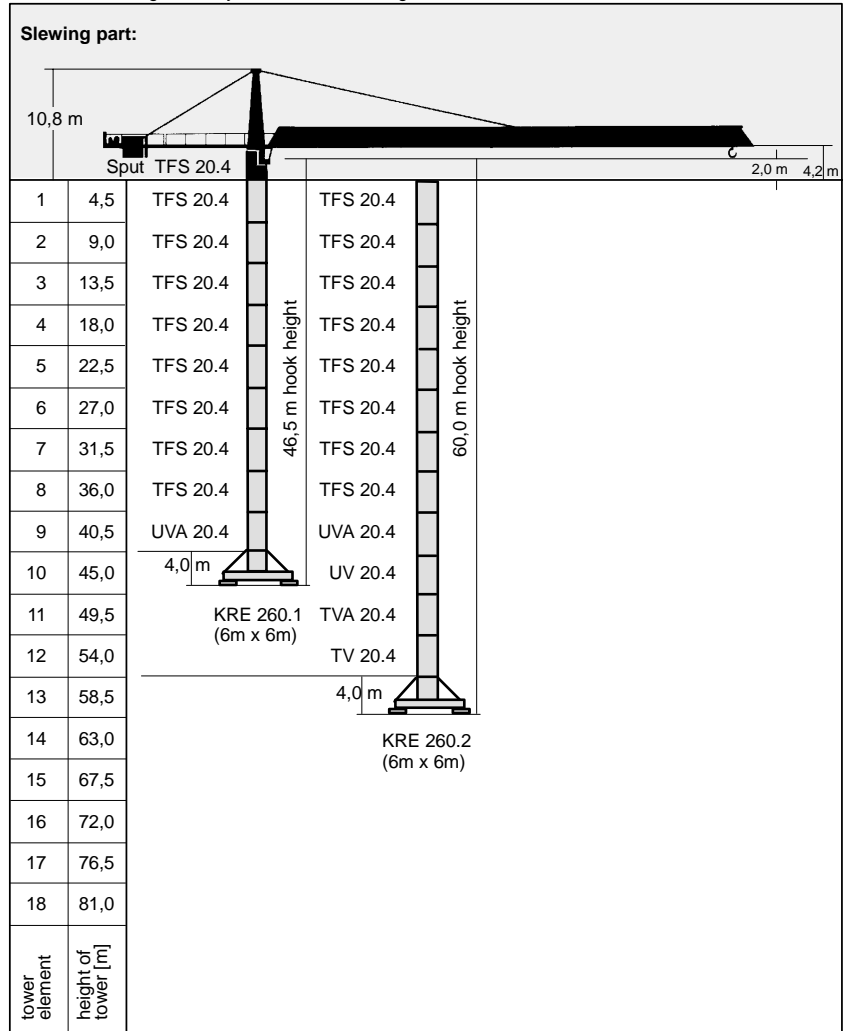
for a free standing stationary crane without climbing device on a cross frame element.



For data regarding cross frame elements see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.8.2 Tower configurations

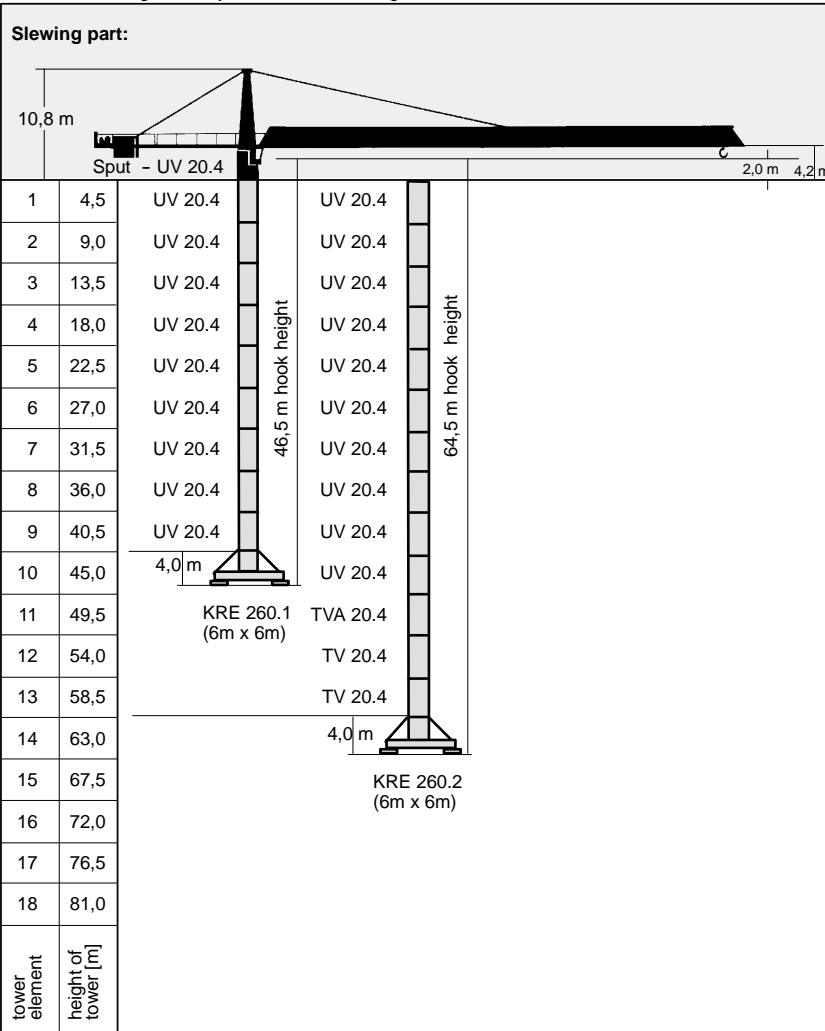
for a free standing stationary crane without climbing device on a cross frame element.



For data regarding cross frame elements see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.8.3 Tower configurations

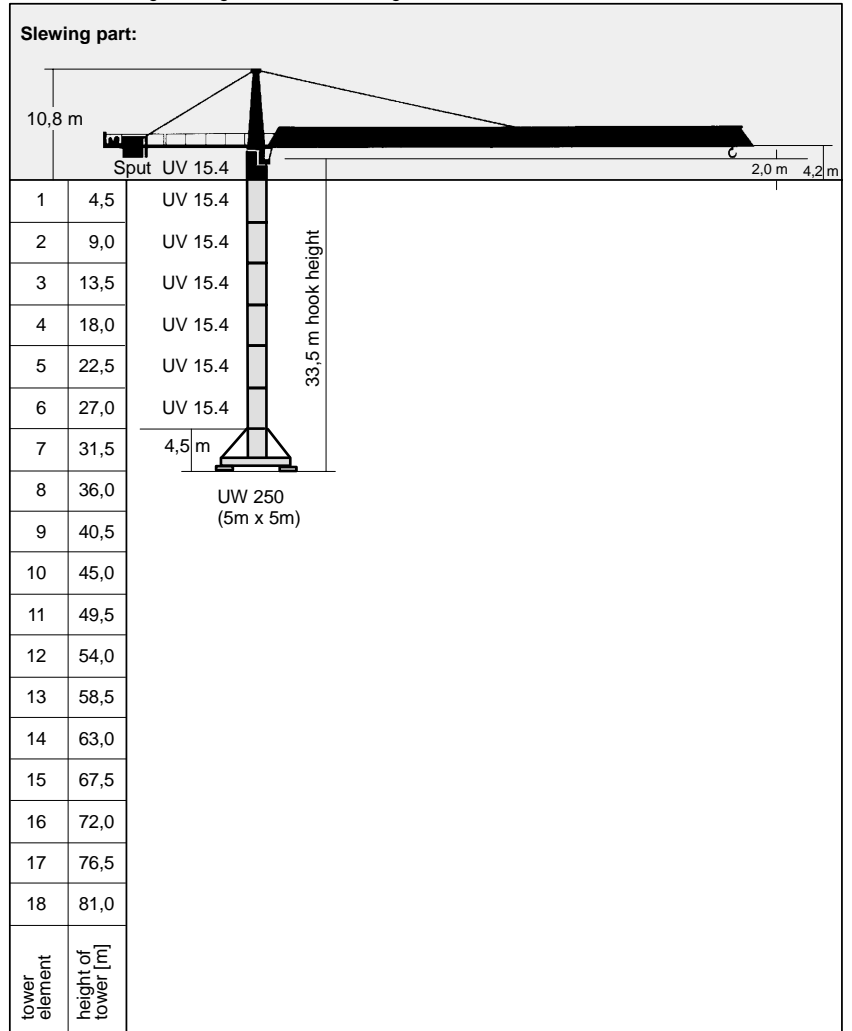
for a free standing stationary crane without climbing device on a cross frame element.



For data regarding cross frame elements see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.1 Tower configuration

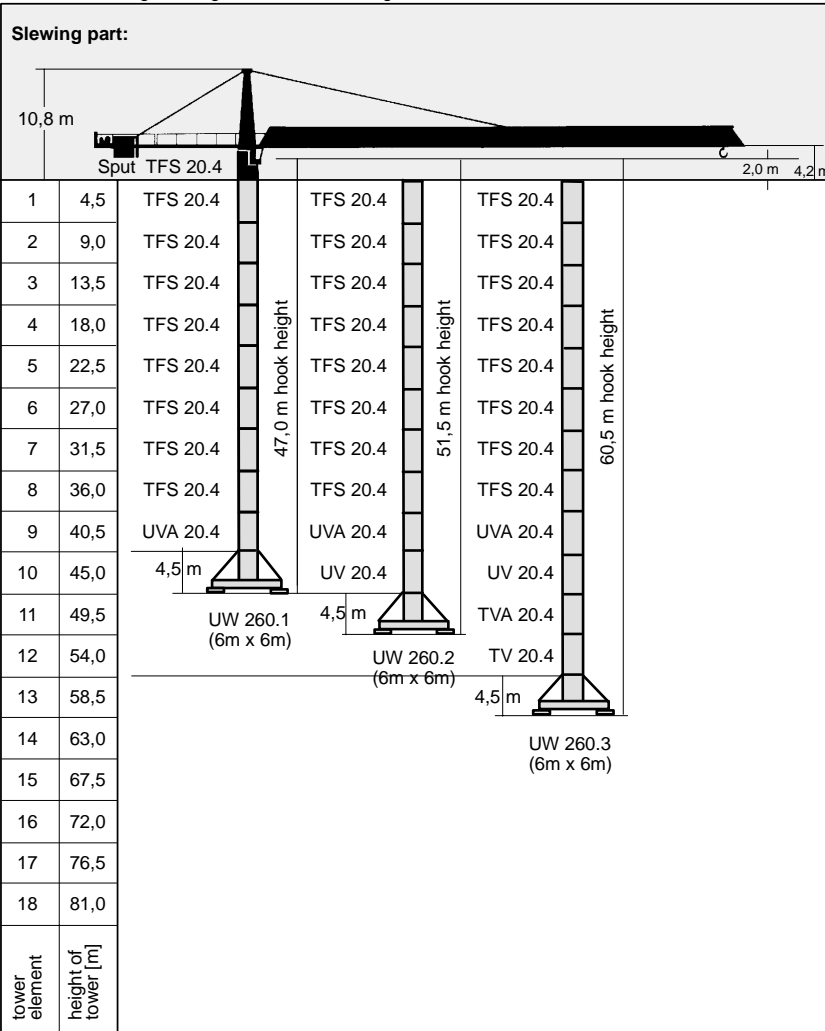
for a free standing travelling crane without climbing device.



For data regarding undercarriage see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.2 Tower configurations

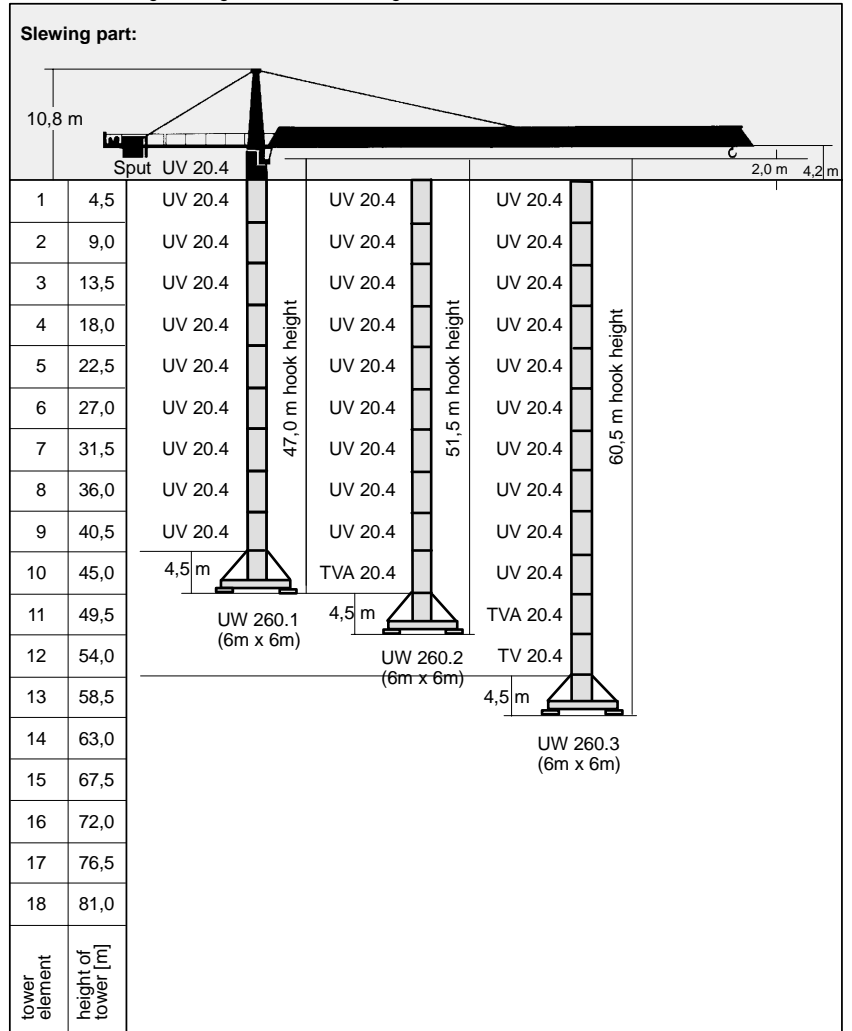
for a free standing travelling crane without climbing.



For data regarding undercarriage see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.2.9.3 Tower configuration

for a free standing travelling crane without climbing device.



For data regarding undercarriage see section 12.
 The tower configurations are recommended for economic crane installation and may be used in any case.
 Tower configurations with other tower elements are possible, but must be checked and confirmed by us in every individual case and before crane installation starts.

2.3.1

Colli list

item	pcs.	Designation	Colli	L	B	H	weight (kg)	volume (m ³)	
				(m)	(m)	(m)			
1	1	tower top complete div. bracing parts		Sput - UV 15.4					
				10,80	1,95	2,00	6800	42,12	
1	1	tower top complete div. bracing parts		Sput - TFS 20.4					
			10,80	2,17	2,42	6700	56,72		
1	1	tower top complete div. bracing parts		Sput - UV 20.4					
				10,80	2,17	2,42	6860	56,72	
item 1 disassembled	tower top lower part with platforms and div. bracing parts			Sput - UV 15.4					
			6,30	1,35	2,10	1720	17,86		
			Sput - TFS 20.4						
			5,62	1,88	2,33	5080	24,62		
			Sput - UV 20.4						
	tower top lower part with slewing frame, KDV, slewing drive and slip ring system		5,62	2,17	2,42	4980	29,51		
Sput - UV 20.4									
5,62			2,17	2,42	5140	29,51			
2	1	driver's cabin with driver's cabin suspension		2,80	2,15	2,45	1100	14,75	
		driver's cabin suspension		1,03	2,01	0,59	230	1,22	
4	1	counterjib with bracing parts		13,48	2,38	0,55	2730	17,65	
5	1	machinery platform with hoisting rope (ø 16 mm x 170 m)		Hw 628 FU					
				2,38	2,29	2,17	2630	11,83	
				Hw 637 FU					
				2,38	2,29	2,17	2700	11,83	
Loose and small parts can be distributed depending on the available space.									

2.3.2

Colli list

Item	Pcs.	Designation	Colli	L	B	H	Weight (kg)	Volume (m ³)
				(m)	(m)	(m)		
6	1	Jib part 1 with trolley drive and bracing parts		10,19	1,26	1,96	2010	25,16
7	1	jib part 2 with reinforcement		10,23	1,23	1,96	1470	24,66
8	1	jib part 3 with bracing parts a.reforcem.		10,23	1,23	1,96	2400	24,66
9	2	jib part 4		5,25	1,23	1,76	620	11,37
10	1	jib part 5		10,23	1,23	1,76	1070	22,15
11	1	jib part 6		10,19	1,23	1,75	865	21,93
12	1	rope swivel traverse		0,91	1,20	0,46	107	0,50
13	1	trolley Lk 6		1,59	1,50	0,96	300	2,29
14	1	hook block U6 (small part)		0,50	0,22	1,11	350	0,12
16	1	standard handrail (small part)		2,55	1,1	1,00	320	2,81
17	1	box (small parts)		1,6	0,9	0,8	400	1,15
Loose and small parts can be distributed depending on the available space.								

2.5.1

Assembly weights - slewing part

Tower top complete - tower connection UV 15.4	8 030 kg
bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail	
- upper part of tower top compl. with bracing brackets and platform	1 720 kg
- driver's cabin with suspension and standard handrail	1 230 kg
- lower part of top with slewing frame, KDV, slewing drive standard handrail and slip ring system	5 080 kg
Tower top complete - tower connection TFS 20.4	7 930 kg
bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail	
- upper part of tower top compl. with bracing brackets and platform	1 720 kg
- driver's cabin with suspension and standard handrail	1 230 kg
- lower part of top with slewing frame, KDV, slewing drive standard handrail and slip ring system	4 980 kg
Tower top complete - tower connection UV 20.4	8 090 kg
bracing brackets (1 x 600 mm, 2 x 5700 mm), drive's cabin driver's cabin suspension, platform with standard handrail	
- upper part of tower top compl. with bracing brackets and platform	1 720 kg
- driver's cabin with suspension and standard handrail	1 230 kg
- lower part of top with slewing frame, KDV, slewing drive standard handrail and slip ring system	5 140 kg
Counterjib with Hw 628 FU complete	7 640 kg
counterweight stone 1,9 t (machinery platform), machinery platform Hw 628 FU with hoist rope (ø 16 mm x 170 m) 2 bracing brackets (2 x 6330 mm) and standard handrail	
- counter jib with 2 bracing brackets and standard handrail	3 110 kg
- machinery platform Hw 628 FU + hoist rope (ø 16 mm x 170 m)	2 630 kg
- counterweight stone 1,9 t	1 900 kg
Counterjib with Hw 637 FU complete	7 710 kg
counterweight stone 1,9 t (machinery platform), machinery platform Hw 637 FU with hoist rope (ø 16 mm x 170 m) 2 bracing brackets (2 x 6330 mm) and standard handrail	
- counter jib with 2 bracing brackets and standard handrail	3 110 kg
- machinery platform Hw 637 FU + hoist rope (ø 16 mm x 170 m)	2 700 kg
- counterweight stone 1,9 t	1 900 kg

962-4-028208E

2.5.2

Assembly weights - slewing parts

55 m Trolley jib complete	9 200 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	
50 m Trolley jib complete	8 580 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	
45 m Trolley jib complete	8 335 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	
40 m Trolley jib complete	7 715 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	
35 m Trolley jib complete	7 265 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	
30 m Trolley jib complete	6 645 kg
- bracing brackets	
- trolley, trolley ropes	
- hook block	
- standard handrail	

962-4-026489E

2.5.3

Assembly weights - cross frame

Cross frame KR 7 - 32	(without optional features)	3 450 kg
	- 4 spigots AZ 85 E 20.5	195 kg
	- 4 spigots AZ 93.4	200 kg
	- 4 spigots AZ 120	272 kg
Cross frame KRS 8 - 46 (4,6 m x 4,6 m)	(without optional features)	5 200 kg
	- 4 spigots AZ 85 E 20.5	195 kg
	- 4 spigots AZ 93.4	200 kg
	- 4 spigots AZ 120 M	272 kg
Cross frame KR 10 - 46/60 (4,6 m x 4,6 m)	(without optional features)	7 000 kg
	- 4 spigots AZR 120 E 15.5	560 kg
	- 4 spigots AZ 140 M	684 kg
Cross frame KR 10 - 46/60 (6,0 m x 6,0 m)	(without optional features)	8 805 kg
	- 4 spigots AZR 120 E 15.5	560 kg
	- 4 spigots AZ 140 M	684 kg
Cross frame KR 1000 - 8	(without optional features)	14 630 kg
	- 4 spigots AZ 140 E	684 kg
	- 4 spigots AZ 156 M	748 kg
Cross frame KR 16 - 80/100 (8 m x 8 m)	(without optional features)	21 450 kg
	- 4 spigots AZ 140 E KR16-80	620 kg
	- 4 spigots AZ 156 M KR16-80	680 kg
	- 4 spigots AZ 156S M KR16-80	675 kg
Cross frame KR 16 - 80/100 (10 m x 10 m)	(without optional features)	25 400 kg
	- 4 spigots AZ 140 E KR16-80	620 kg
	- 4 spigots AZ 156 M KR16-80	680 kg
	- 4 spigots AZ 156S M KR16-80	675 kg

2.5.4

Assembly weights - cross frame element and undercarriage

Cross frame element KRE 250 complete	5 750 kg
- cross frame platform with swivel arms, corner bearings and transport safety devices	2 730 kg
- base mast part with diagonal struts and track rod	3 020 kg
Cross frame element KRE 260.1 complete 8 100 kg	
- cross frame platform with swivel arms, corner bearings and transport safety devices	4 320 kg
- base mast part with diagonal struts and track rod	3 780 kg
Cross frame element KRE 260.2 complete	10 900 kg
- cross frame platform with swivel arms, corner bearings and transport safety devices	5 455 kg
- base mast part with diagonal struts and track rod	5 445 kg
Undercarriage UW 250 complete	8 800 kg
- undercarriage platform with swivel arms, subframes and transport safety devices	5 600 kg
- Basismaststück mit Druckstreben und Spurstangen	3 200 kg
Undercarriage UW 260.1 complete	11 400 kg
- undercarriage platform with swivel arms, subframes and transport safety devices	7 150 kg
- Basismaststück mit Druckstreben und Spurstangen	4 250 kg
Undercarriage UW 260.2 complete	13 930 kg
- undercarriage platform with swivel arms, subframes and transport safety devices	8 050 kg
- Basismaststück mit Druckstreben und Spurstangen	5 880 kg
Undercarriage UW 260.3 complete	17 200 kg
- undercarriage platform with swivel arms, subframes and transport safety devices	11 300 kg
- Basismaststück mit Druckstreben und Spurstangen	5 900 kg

2.5.5

Required height under hook for the mobile crane



Warning!

Use suspension ropes with sufficient capacity and observe suspension plan!

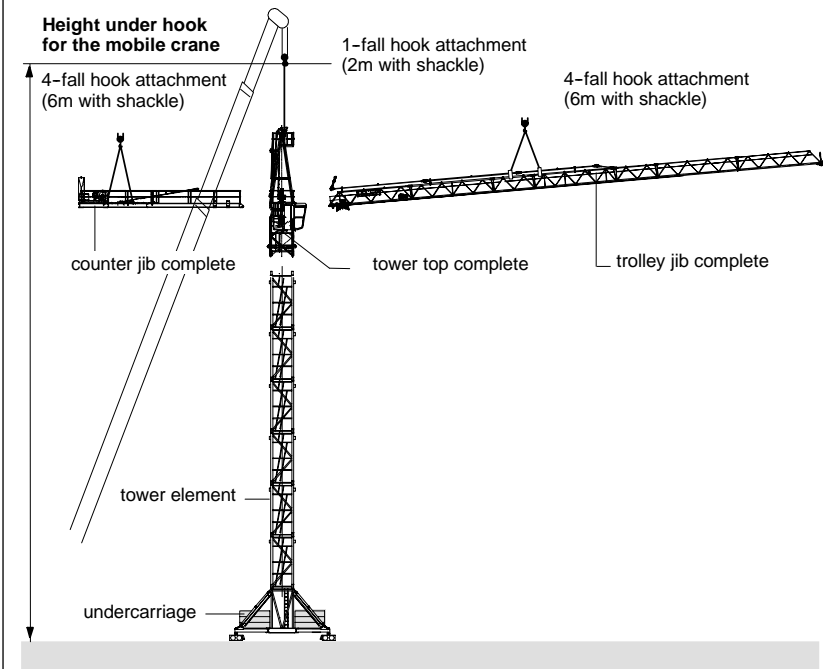
Required height under hook for mobile crane

=
Height under hook of WOLFF tower crane + min. 15 m.

For data regarding the height under hook of WOLFF tower crane see tower configurations.

If the crane will be erected on another substructure, the required height under hook of the crane increases by the structural dimension of the substructure.

Differences in ground (mobile crane basis - tower crane basis) must be considered for erection.



2.6.1.1

Trolley jib - suspension plan - 60 m to 50 m jib



Danger in case of disassembling!

Release fixing bolts at the pivot point of the jib. Jib must be balanced before it can be extended. There mustn't be any loose parts on the jib. The parts of the jib are labeled with a building part identification at the top chord.

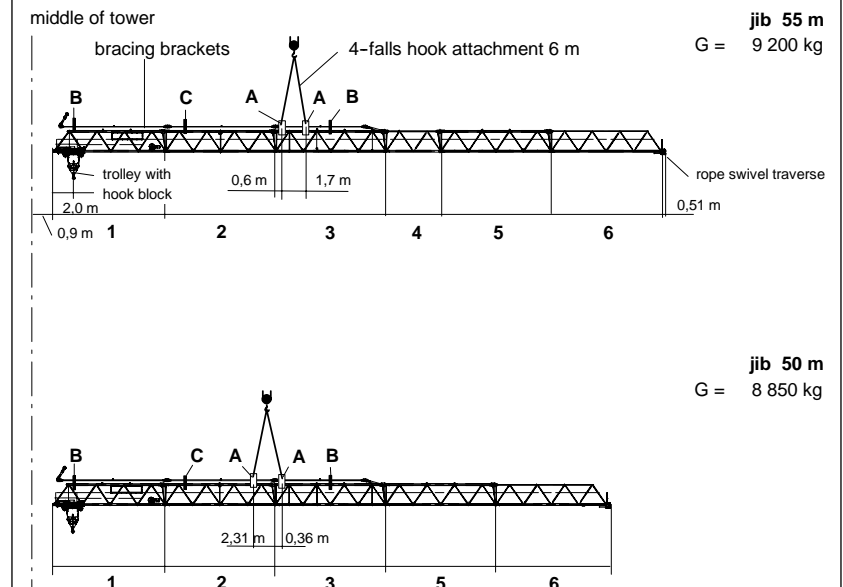
Lengths:	jib part	1/2/3/5/6	=	10,0 m
	jib part	4/7	=	5,0 m
	rope swivel traverse		=	0,51 m

More details about suspension **A** and support **B** and support **C** see section 2.6.2.



Attention!

For assembly hang on snatch block with 2 sling ropes DIN 3088 (Ø 8 mm x 1 m with shackle) to the trolley, reeve in assembly rope (perlon rope Ø 14 mm x 12 m) and secure at the trolley.



2.6.1.2 Trolley jib - suspension plan - 45 m to 30 m jib



Danger in case of disassembling!

Release fixing bolts at the pivot point of the jib. Jib must be balanced before it can be extended. There mustn't be any loose parts on the jib. The parts of the jib are labeled with a building part identification at the top chord.

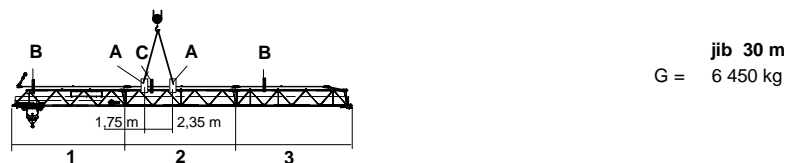
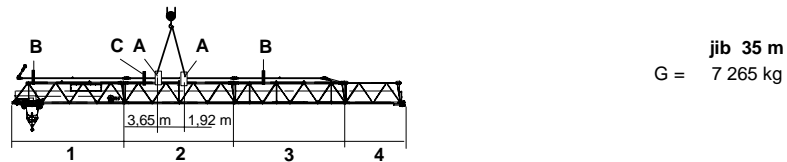
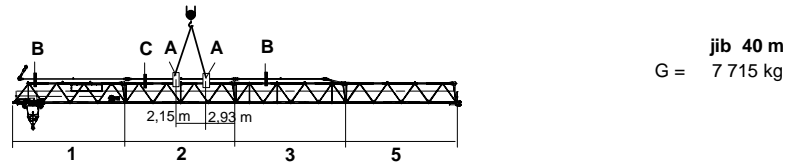
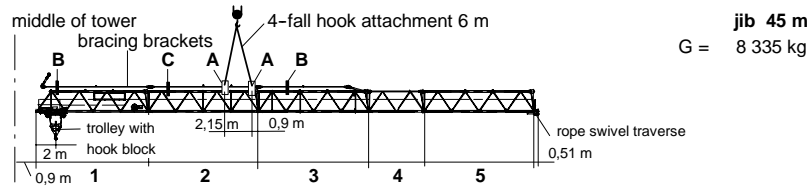
Lengths:	jib part	1/2/3/5	= 10,0 m
	jib part	4	= 5,0 m
	rope swivel traverse		= 0,51 m

More details about suspension **A** and support **B** and support **C** see section 2.6.2.



Attention!

For assembly hang on snatch block with 2 sling ropes DIN 3088 (Ø 8 mm x 1 m with shackle) to the trolley, reeve in assembly rope (perlon rope Ø 14 mm x 12 m) and secure at the trolley.



2.7.1

Hoisting rope

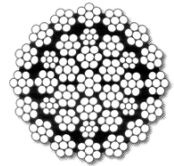
for hoisting winch Hw 628 FU / Hw 637 FU

Cable Ø = 16 mm +4% +2%

design according to DIN 15 020
kind of operation TWG 1 Am

First equipment

CASAR STARLIFT -
non twisting
flexible hoisting rope
with compressed
cable core



nominal strength = 1770 N/mm²
calc. breaking strength = 234,1 kN
min. breaking strength = 178,1 kN
weight per meter = 1,191 kg

Design

langs lay rope, right handed,
made from cable wire.

middle space factor = 0,654
middle spinning loss factor = 0,76
middle weight factor = 0,90
total twist number = 245

Number of carryig wires in the outer strands
is to be judged by the state of wear according to
DIN 15020 Bl. 2 / ISO DIS 4309 = 112

Basic equipment

cable length 170 m	for crane with:	cable radius	2 fall
		hook path	55 m
			42 m

By lengthening the hook path by 1 tower element (4,5 m) the necessary cable length increases by 9 m for operation in 2 falls .



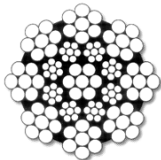
Attention!

A wire cable is a complex machine element.

Conventional cable design frequently doesn't meet the requirements of modern rope drives. short service life is the result.

2.7.2

Traversing rope

<p>Cable \varnothing = 8 mm + 4% + 2%</p>	<p>design according to DIN 15 020 kind of operation TWG 1 Am</p>
<p>First equipment</p>	<p>CASAR UNILIFT - cable with 8 strands in non-overlapped double parallel construction made out of uncompressed strands.</p> 
<p>Design</p>	<p>nominal strength = 1770 N/mm² calc. breaking strength = 57,4 kN min. breaking strength = 49,9 kN weight per meter = 0,282 kg</p> <p>ordinary lay rope, right handed, surface of wires zinc coated.</p> <p>middle space factor = 0,643 middle spinning loss factor = 0,90 middle weight factor = 0,87 total twist number = 119</p> <p>Number of carryig wires in the outer strands is to be judged by the state of wear according to DIN 15020 Bl. 2 / ISO DIS 4309 = 56</p>

Basic equipment

cable lengths	1 x 65 m	for crane with: radius	55 m
	1 x 108 m		

Attention!
A wire cable is a complex machine element.

Conventional cable design frequently doesn't meet the requirements of modern rope drives. short service life is the result.

2.8.1

Insertable exterior climbing gear

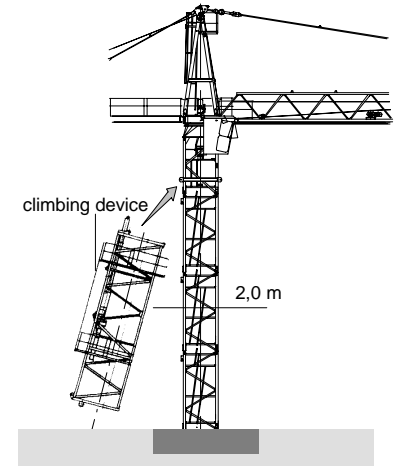
The following removable hydraulic exterior climbing gear can be used with the tower crane WOLFF 5520 FL - 6 .

- **KWH 20.3**

KWH 20.3 information is given in a separate documentation in section 12, Additional Equipment.

Min. height with stationary erection:
3 tower elements = 13,5 m tower height

Min. height with travelling erection:
2 tower elements + undercarriage
appr. 13,5 m tower height



2.8.5

Balancing weights for climbing

- * The indicated balancing weights are gross-weights of towersections or a load.
- ** The given (m) data for position of weights along jib are approximate only and refer to center of tower. The exact balance point is arrived at by short moves of trolley and is considered arrived when the towersection concerned lifts out of the resting tower without any friction. Be careful and try repeatedly until best possible balancing is assured.

--- balancing not possible

for climbing in UV-20 tower elements	jib					
	30 m	35 m	40 m	45 m	50 m	55 m
with balancing load * UV 20.4 = 1,95 t	** 11,7	11,1	8,4	---	---	---
without balancing load	---	---	---	26,7	23,5	12,8
for climbing in TFS 20.4 tower elements						
with balancing load * TFS 20.4 = 1,45 t	** 15,5	14,9	11,5	---	---	---
without balancing load	---	---	---	29,4	26,2	15,6

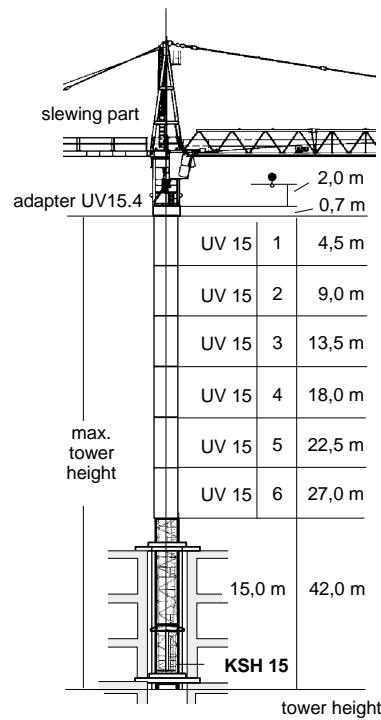


Danger!
While climbing, the slewing part of the crane must be locked in the direction of moving towersections in or out the tower. Until tower has been repinned fully and in all holes, the balancing must be kept and the slew part must remain locked. (For details, please see operational manual KWH 20.3).
The climbing device is an auxilliary device for assembly and mustn't stay at the tower crane WOLFF under normal working conditions.

2.8.4 **Insertable internal climbing device KSH 15**

For use of the WOLFF 5520 in connection with internal climbing device KSH 15, the tower combination has to be observed as shown here.

KSH15 informations is given in a seperate documentation in section 12, Additional Equipment.



2.8.4.1 **Table of balancing weights**

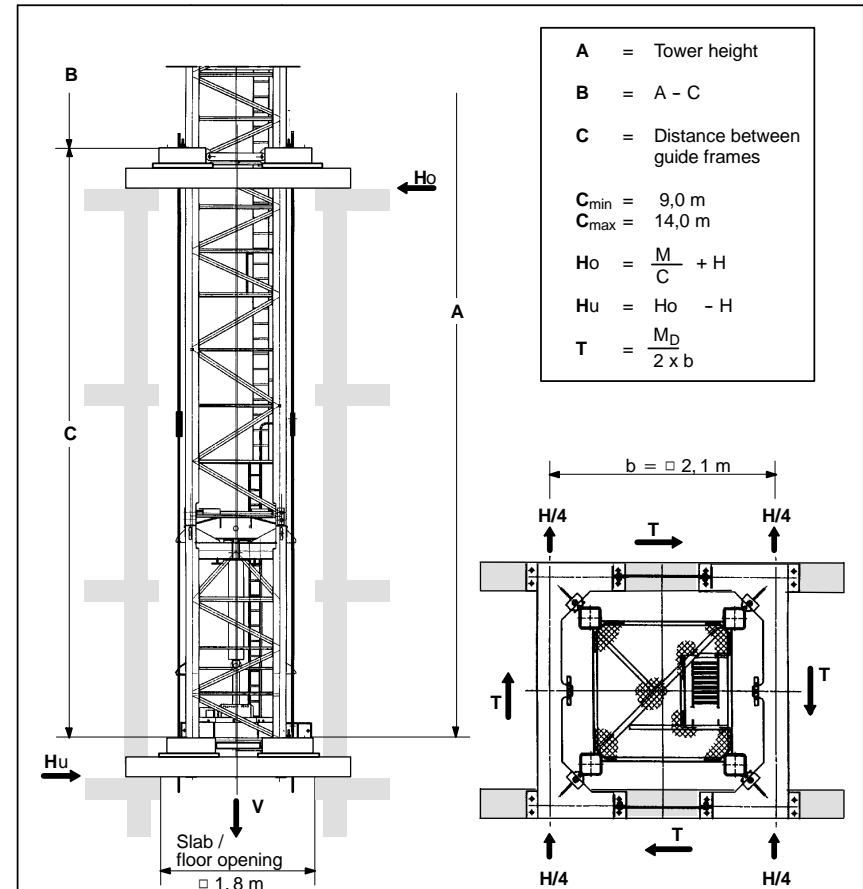
* The indicated balancing weights are gross-weights of tower elements or load.

** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of trolley with tower element or load and can checked by measuring the distance between corner posts and tensioning brackets. This distance shall be equal at all four corner posts.

-- balancing not possible

5520.10 balancing weight *	jib						
	30 m	35 m	40 m	45 m	50 m	55 m	
UV 20.4 = 1,95 t	**	27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2	
5520.6							
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9	
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2	
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1	

2.8.4.2 **Reacting forces to building for internal hydraulic climbing device KSH 15**



Reacting forces to building (kN)

A (m)	42,0				37,5				33,0				28,5			
	9	10	12	14	9	10	12	14	9	10	12	14	9	10	12	14
V	687	687	687	687	668	668	668	668	650	650	650	650	632	632	632	632
Ho	374	345	302	271	315	292	257	231	262	244	215	195	220	200	177	161
Hu	287	258	215	185	235	212	177	151	211	190	158	136	196	176	147	126
T	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45

2.8.5 Insertable internal climbing device KSH 20 L

For use of the WOLFF 5520 in connection with internal climbing device KSH 20 L, the tower combination has to be observed as shown here.

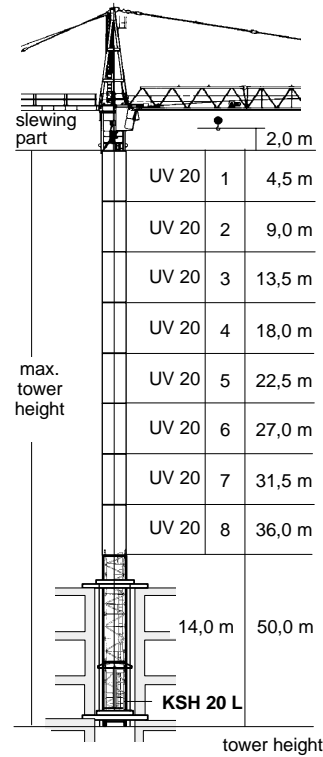
KSH20L informations is given in a seperate documentation in section 12, Additional Equipment.

2.8.5.1 Table of balancing weights

* The indicated balancing weights are gross-weights of tower elements or load.

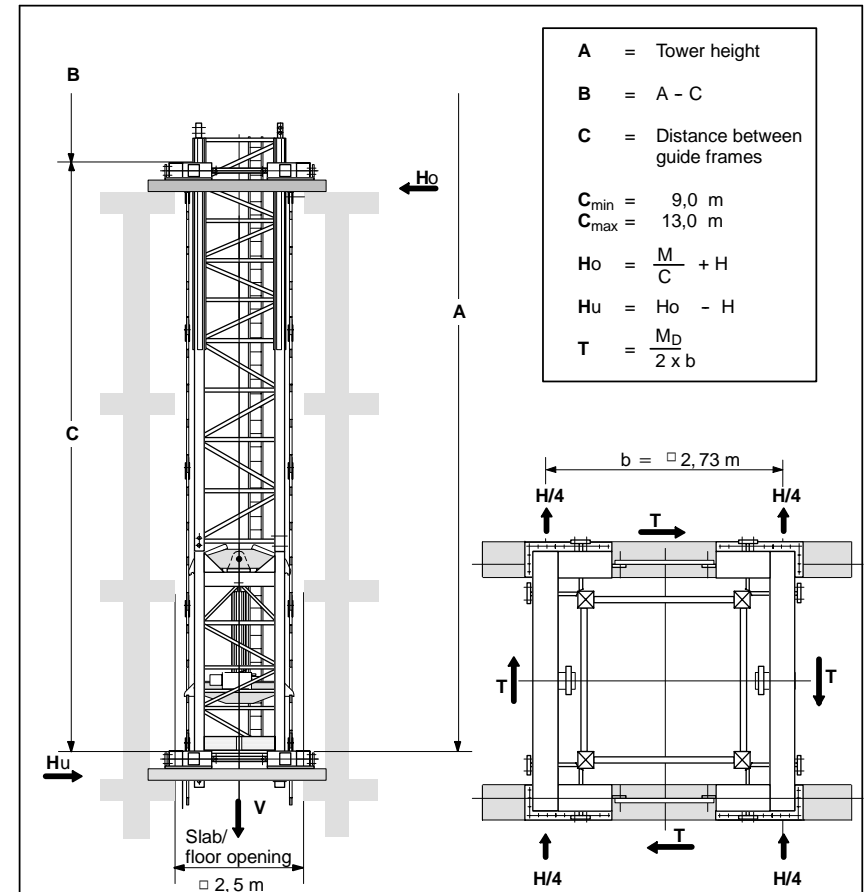
** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must achieved by travelling of trolley with tower element or load and can checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four corner posts.

-- balancing not possible



5520.10 balancing weight *	jib					
	30 m	35 m	40 m	45 m	50 m	55 m
UV 20.4 = 1,95 t	** 27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2
5520.6						
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1

2.8.5.2 Reacting forces to building for internal hydraulic climbing device KSH 20 L



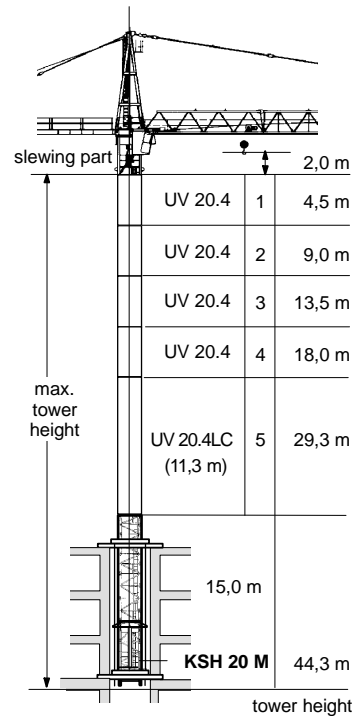
Reacting forces to building (kN)

A (m)	50,0				45,5				41,0				36,5			
C (m)	9	10	12	13	9	10	12	13	9	10	12	13	9	10	12	13
V	741	741	741	741	722	722	722	722	703	703	703	703	684	684	684	684
Ho	506	466	405	381	437	402	351	331	374	345	302	286	315	292	257	243
Hu	406	366	305	281	344	309	258	238	287	258	215	199	235	212	177	163
T	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35

2.8.6 Insertable internal climbing device KSH 20 M

For use of the WOLFF 5520 in connection with internal climbing device KSH 20 M, the tower combination has to be observed as shown here.

KSH20M informations is given in a separate documentation in section 12, Additional Equipment.



2.8.6.1 Table of balancing weights

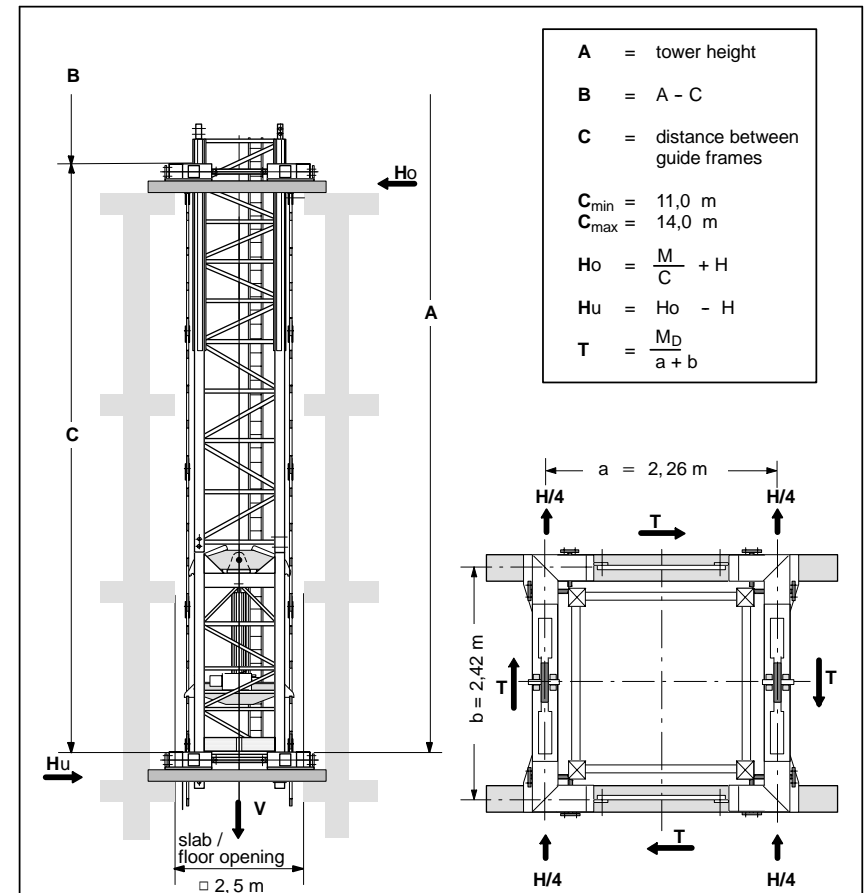
* The indicated balancing weights are gross-weights of tower elements or load.

** The indicated radius refers to the centre of the tower and shall be treated as standard value. Exact balancing must be achieved by travelling of trolley with tower element or load and can be checked by measuring the distance between corner posts and guide plates. This distance shall be equal at all four corner posts.

-- balancing not possible

5520.10 balancing weight *	Jib					
	30 m	35 m	40 m	45 m	50 m	55 m
UV 20.4 = 1,95 t	** 27,5	28,3	26,4	26,0	25,7	24,3
TFS 20.4 = 1,45 t	--	33,7	31,4	31,0	30,6	28,9
weight = 5,00 t	13,9	14,3	13,3	13,1	12,9	12,2
5520.6						
UV 20.4 = 1,95 t	--	32,5	30,3	29,9	29,5	27,9
TFS 20.4 = 1,45 t	--	--	37,2	36,7	36,2	34,2
weight = 5,00 t	14,9	15,3	14,2	14,0	13,8	13,1

2.8.6.2 Reacting forces to building for internal hydraulic climbing device KSH 20 M

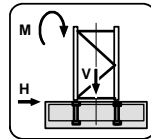


Reacting forces to building (kN)

A (m)	44,3				39,8				35,3				30,8			
C (m)	11	12	13	14	11	12	13	14	11	12	13	14	11	12	13	14
V	720	720	720	720	700	700	700	700	680	680	680	680	660	660	660	660
H_o	379	355	335	224	329	308	291	277	279	262	248	237	234	221	210	200
H_u	285	261	241	130	241	220	203	189	198	181	167	156	178	163	151	140
T	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40

3.1.1 Foundation loads according to DIN

for stationary tower crane on a concrete foundation
 according to tower configuration without climbing device
 Permanent acting moment = 629 kNm
 M = moment H = horizontal force V = vertical load

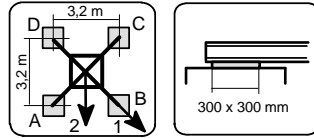


Foundation loads **Jib length 30 - 55 m**

height under hook [m]	Crane in service Drehmoment 190 kNm			Crane out of service			Assembly		
	M [kNm]	H [kN]	V [kN]	M [kNm]	H [kN]	V [kN]	M [kNm]	H [kN]	V [kN]
11,0	1332	18	405	208	46	451	1318	11	265
15,5	1423	19	421	430	50	477	1377	13	279
20,0	1523	21	437	677	55	496	1444	14	293
24,5	1625	22	452	970	61	514	1521	16	307
29,0	1760	24	468	1315	67	532	1608	17	321
33,5	1897	25	483	1696	74	550	1705	18	335
38,0	2049	27	498	2118	80	568	1813	20	349
42,5	2216	28	514	2583	87	587	1932	21	363
47,0	2376	30	540	3094	93	605	2050	23	387
51,5	2564	31	560	3657	100	623	2186	24	405
56,0	2731	34	602	4223	112	661	2316	27	443
60,5	2935	36	669	4868	120	690	2469	29	472
65,0	3160	38	700	5573	127	718	2635	31	500
69,5	3407	40	731	6352	136	746	2817	33	528
74,0	3617	42	770	7092	146	782	2982	35	568
78,5	3873	44	805	7952	156	814	3179	38	600
Attention! Tower configuration with basis tower element BT 29									
85,2	4220	48	1014	9250	168	905	3460	43	728
89,7	4500	51	1061	10240	179	951	3690	45	765
94,2	4810	54	1107	11300	190	997	3930	48	811
98,7	5140	56	1153	13270	209	1043	4190	50	857
103,2	5500	54	1200	14540	220	1090	4470	53	903

3.2.1.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

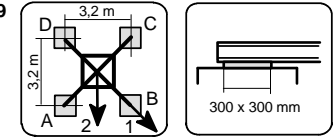


KR 7 - 32 Corner distance 3,2 m x 3,2 m **jib 30 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,3	85,0	1	315	559	315	72	18	1	259	455	259	62	40
		2	488	488	143	143		2	398	398	120	120	
11,8	85,0	1	320	577	320	62	19	1	263	470	263	56	42
		2	502	502	138	138		2	409	409	117	117	
16,3	85,0	1	324	597	324	51	21	1	267	486	267	49	47
		2	517	517	131	131		2	422	422	113	113	
20,8	85,0	1	328	620	328	37	22	1	272	504	272	40	60
		2	534	534	122	122		2	436	436	108	108	
25,3	85,0	1	332	645	332	20	23	1	276	523	276	29	66
		2	553	553	112	112		2	451	451	101	101	
29,8	85,0	1	337	673	337	1	25	1	280	545	280	16	72
		2	574	574	99	99		2	467	467	93	93	
34,3	95,0	1	366	729	366	3	26	1	351	628	351	74	78
		2	623	623	109	109		2	547	547	155	155	

3.2.1.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

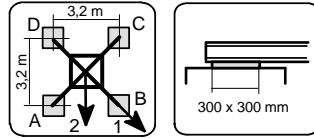


KR 7 - 32 Corner distance 3,2 m x 3,2 m **jib 35 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,3	77,5	1	304	532	304	77	18	1	240	437	240	43	40
		2	465	465	143	143		2	379	379	101	101	
11,8	77,5	1	309	550	309	67	20	1	244	452	244	37	43
		2	479	479	138	138		2	391	391	98	98	
16,3	77,5	1	313	571	313	55	21	1	249	468	249	29	47
		2	495	495	131	131		2	404	404	94	94	
20,8	77,5	1	317	593	317	41	22	1	253	486	253	20	61
		2	512	512	122	122		2	418	418	88	88	
25,3	77,5	1	321	619	321	24	24	1	257	505	257	9	67
		2	532	532	111	111		2	433	433	82	82	
29,8	77,5	1	326	647	326	5	25	1	257	531	257	0	72
		2	553	553	99	99		2	458	458	164	164	
34,3	92,5	1	368	716	368	19	26	1	353	638	353	67	78
		2	614	614	121	121		2	555	555	150	150	

3.2.1.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

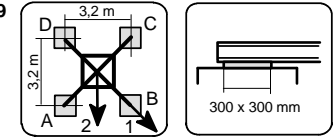


KR 7 - 32 Corner distance 3,2 m x 3,2 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,3	75,0	1	312	554	312	70	19	1	257	472	257	42	42
		2	483	483	141	141	2	409	409	105	105		
11,8	75,0	1	316	573	316	60	20	1	261	489	261	33	44
		2	498	498	135	135	2	422	422	100	100		
16,3	75,0	1	321	594	321	47	21	1	265	508	265	23	49
		2	514	514	127	127	2	437	437	94	94		
20,8	75,0	1	325	618	325	32	23	1	270	529	270	10	63
		2	532	532	118	118	2	453	453	86	86		
25,3	75,0	1	329	645	329	14	24	1	270	556	270	0	69
		2	552	552	106	106	2	471	471	77	77		
29,8	75,0	1	326	682	326	0	25	1	257	598	257	0	75
		2	575	575	92	92	2	510	510	127	127		
34,3	80,0	1	330	741	330	0	27	1	317	707	317	0	81
		2	612	612	88	88	2	585	585	85	85		

3.2.1.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

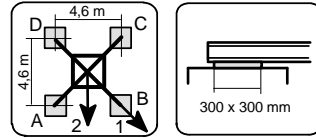


KR 7 - 32 Corner distance 3,2 m x 3,2 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
7,3	67,5	1	301	535	301	67	19	1	197	565	197	0	42
		2	466	466	136	136	2	439	439	40	40		
11,8	67,5	1	305	554	305	57	20	1	192	591	192	0	45
		2	481	481	129	129	2	453	453	35	35		
16,3	67,5	1	310	576	310	44	22	1	185	622	185	0	49
		2	498	498	121	121	2	468	468	28	28		
20,8	67,5	1	314	600	314	28	23	1	176	657	176	0	64
		2	516	516	112	112	2	485	485	20	20		
25,3	72,5	1	331	640	331	22	24	1	190	696	190	0	70
		2	549	549	112	112	2	515	515	23	23		
29,8	77,5	1	347	682	347	12	26	1	202	740	202	0	76
		2	584	584	111	111	2	548	548	24	24		
34,3	82,5	1	364	730	364	0	27	1	211	789	211	0	81
		2	622	622	106	106	2	619	619	80	80		

3.2.3.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

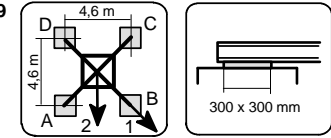


KR 10 - 46 Corner distance 4,6 m x 4,6 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	32,5	1	220	399	220	41	20	1	164	324	164	5	45		
		2	346	346	93	93		2	277	277	52	52			
16,7	32,5	1	223	414	223	33	22	1	166	340	166	0	50		
		2	358	358	88	88		2	288	288	48	48			
21,2	32,5	1	227	430	227	23	23	1	161	362	161	0	64		
		2	371	371	83	83		2	299	299	43	43			
25,7	32,5	1	230	448	230	12	25	1	156	388	156	0	70		
		2	384	384	76	76		2	316	316	114	114			
30,2	32,5	1	232	470	232	0	26	1	148	416	148	0	77		
		2	400	400	67	67		2	356	356	81	81			
34,7	37,5	1	246	507	246	0	27	1	217	505	217	0	83		
		2	429	429	70	70		2	413	413	56	56			
39,2	55,0	1	297	571	297	23	29	1	247	633	247	0	89		
		2	491	491	103	103		2	505	505	58	58			
43,7	77,5	1	357	654	357	59	30	1	296	773	296	0	95		
		2	567	567	146	146		2	615	615	68	68			
48,2	102,5	1	424	745	424	102	32	1	355	925	355	0	102		
		2	651	651	196	196		2	736	736	82	82			
52,7	127,5	1	491	839	491	142	33	1	405	1092	405	0	108		
		2	737	737	244	244		2	862	862	90	90			
57,2	152,5	1	563	935	563	191	36	1	466	1260	466	0	117		
		2	826	826	300	300		2	993	993	102	102			
61,7	182,5	1	645	1046	645	244	38	1	533	1454	533	0	125		
		2	928	928	361	361		2	1144	1144	116	116			
66,2	215,0	1	733	1166	733	300	40	1	604	1664	604	0	133		
		2	1039	1039	427	427		2	1307	1307	130	130			

3.2.3.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

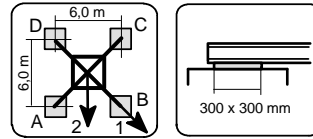


KR 10 - 46 Corner distance 4,6 m x 4,6 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	30,0	1	221	395	221	47	21	1	113	413	113	0	46		
		2	344	344	98	98		2	306	306	13	13			
16,7	30,0	1	225	410	225	39	22	1	109	434	109	0	50		
		2	356	356	93	93		2	317	317	10	10			
21,2	32,5	1	234	433	234	36	23	1	117	458	117	0	65		
		2	375	375	94	94		2	335	335	11	11			
25,7	35,0	1	244	458	244	30	25	1	123	484	123	0	71		
		2	395	395	93	93		2	354	354	11	11			
30,2	40,0	1	260	491	260	30	26	1	140	514	140	0	77		
		2	423	423	97	97		2	395	395	95	95			
34,7	42,5	1	270	519	270	20	28	1	143	547	143	0	84		
		2	446	446	93	93		2	446	446	63	63			
39,2	57,5	1	311	581	311	40	29	1	256	672	256	0	90		
		2	502	502	120	120		2	533	533	58	58			
43,7	80,0	1	371	665	371	76	30	1	303	816	303	0	96		
		2	579	579	163	163		2	644	644	67	67			
48,2	105,0	1	438	757	438	119	32	1	360	971	360	0	103		
		2	663	663	212	212		2	766	766	79	79			
52,7	132,5	1	511	857	511	165	33	1	421	1142	421	0	109		
		2	756	756	266	266		2	900	900	92	92			
57,2	157,5	1	583	953	583	213	36	1	480	1312	480	0	118		
		2	845	845	321	321		2	1032	1032	104	104			
61,7	187,5	1	665	1065	665	265	38	1	546	1509	546	0	126		
		2	948	948	382	382		2	1184	1184	117	117			
66,2	222,5	1	760	1192	760	327	40	1	627	1724	627	0	134		
		2	1066	1066	454	454		2	1354	1354	135	135			

3.2.4.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

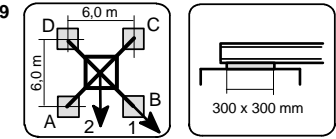


KR 10 - 60 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	12,5	1	165	301	165	29	20	1	83	223	83	0	45
		2	261	261	69	69		2	177	177	19	19	
16,7	12,5	1	170	314	170	26	22	1	87	237	87	0	50
		2	272	272	68	68		2	186	186	19	19	
21,2	12,5	1	174	327	174	20	23	1	86	251	86	0	64
		2	282	282	65	65		2	199	199	118	118	
25,7	12,5	1	177	342	177	13	25	1	85	268	85	0	70
		2	293	293	61	61		2	228	228	97	97	
30,2	12,5	1	181	357	181	4	26	1	166	297	166	34	76
		2	305	305	56	56		2	258	258	73	73	
34,7	17,5	1	197	386	197	7	28	1	182	355	182	8	83
		2	331	331	62	62		2	305	305	59	59	
39,2	27,5	1	225	430	225	20	29	1	200	441	200	0	89
		2	370	370	80	80		2	366	366	54	54	
43,7	40,0	1	260	481	260	39	31	1	218	544	218	0	95
		2	416	416	103	103		2	437	437	52	52	
48,2	57,5	1	307	547	307	67	32	1	256	657	256	0	101
		2	477	477	138	138		2	525	525	60	60	
52,7	77,5	1	362	621	362	103	34	1	303	780	303	0	108
		2	545	545	179	179		2	622	622	71	71	
57,2	95,0	1	413	691	413	134	35	1	340	910	340	0	115
		2	609	609	216	216		2	719	719	76	76	
61,7	117,5	1	476	776	476	176	37	1	395	1054	395	0	123
		2	688	688	264	264		2	834	834	88	88	
66,2	140,0	1	539	863	539	216	39	1	443	1211	443	0	131
		2	768	768	310	310		2	952	952	96	96	

3.2.4.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

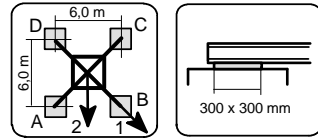


KR 10 - 60 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
12,2	10,0	1	167	303	167	30	21	1	71	224	71	0	46
		2	263	263	70	70		2	190	190	37	37	
16,7	10,0	1	172	317	172	26	22	1	74	237	74	0	50
		2	274	274	69	69		2	201	201	37	37	
21,2	10,0	1	175	330	175	20	24	1	73	252	73	0	65
		2	285	285	66	66		2	210	210	34	34	
25,7	10,0	1	179	345	179	13	25	1	72	269	72	0	71
		2	296	296	61	61		2	235	235	92	92	
30,2	12,5	1	188	366	188	10	27	1	173	314	173	33	77
		2	314	314	62	62		2	273	273	74	74	
34,7	15,0	1	198	390	198	6	28	1	183	368	183	0	83
		2	334	334	63	63		2	313	313	53	53	
39,2	25,0	1	227	434	227	20	29	1	192	463	192	0	90
		2	373	373	80	80		2	375	375	48	48	
43,7	40,0	1	268	492	268	44	31	1	221	568	221	0	96
		2	426	426	109	109		2	453	453	52	52	
48,2	57,5	1	315	558	315	72	32	1	258	683	258	0	102
		2	487	487	143	143		2	541	541	58	58	
52,7	77,5	1	369	632	369	107	34	1	305	808	305	0	109
		2	555	555	184	184		2	640	640	69	69	
57,2	97,5	1	427	709	427	144	36	1	353	940	353	0	116
		2	626	626	227	227		2	744	744	79	79	
61,7	120,0	1	490	795	490	185	38	1	406	1087	406	0	124
		2	705	705	274	274		2	859	859	91	91	
66,2	145,0	1	559	888	559	231	39	1	466	1246	466	0	132
		2	792	792	327	327		2	985	985	104	104	

3.2.4.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

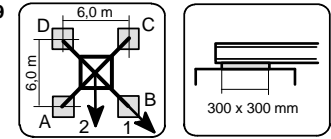


KR 10 - 60 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	10,0	1	169	307	169	32	21	1	106	245	106	0	46		
		2	267	267	72	72		2	201	201	28	28			
16,7	10,0	1	174	320	174	28	22	1	108	261	108	0	51		
		2	278	278	71	71		2	211	211	27	27			
21,2	10,0	1	178	334	178	22	24	1	106	278	106	0	65		
		2	288	288	68	68		2	221	221	24	24			
25,7	10,0	1	181	348	181	15	25	1	104	297	104	0	72		
		2	299	299	63	63		2	244	244	89	89			
30,2	12,5	1	191	370	191	12	27	1	176	325	176	27	78		
		2	318	318	64	64		2	282	282	71	71			
34,7	12,5	1	195	388	195	2	28	1	166	386	166	0	84		
		2	331	331	58	58		2	316	316	43	43			
39,2	25,0	1	229	438	229	21	30	1	187	483	187	0	90		
		2	377	377	82	82		2	385	385	44	44			
43,7	42,5	1	277	502	277	51	31	1	229	589	229	0	97		
		2	436	436	117	117		2	470	470	53	53			
48,2	60,0	1	324	569	324	79	32	1	265	706	265	0	103		
		2	497	497	151	151		2	558	558	59	59			
52,7	80,0	1	378	643	378	113	34	1	311	832	311	0	109		
		2	566	566	191	191		2	658	658	69	69			
57,2	100,0	1	436	721	436	150	36	1	358	966	358	0	117		
		2	637	637	234	234		2	762	762	79	79			
61,7	122,5	1	499	806	499	191	38	1	410	1114	410	0	125		
		2	716	716	281	281		2	878	878	90	90			
66,2	147,5	1	568	900	568	236	40	1	469	1276	469	0	133		
		2	803	803	334	334		2	1005	1005	102	102			

3.2.4.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

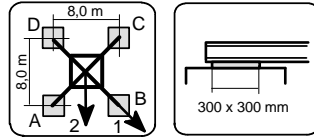


KR 10 - 60 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force			Cornerloads				Horizontal force	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
12,2	12,5	1	184	317	184	50	21	1	85	317	85	0	47		
		2	278	278	89	89		2	234	234	10	10			
16,7	12,5	1	188	331	188	46	23	1	87	333	87	0	51		
		2	289	289	88	88		2	245	245	9	9			
21,2	12,5	1	192	344	192	40	24	1	85	351	85	0	66		
		2	299	299	84	84		2	255	255	6	6			
25,7	15,0	1	202	365	202	38	25	1	95	371	95	0	72		
		2	317	317	86	86		2	273	273	100	100			
30,2	17,5	1	211	387	211	36	27	1	103	393	103	0	79		
		2	336	336	87	87		2	311	311	82	82			
34,7	20,0	1	221	411	221	31	28	1	110	418	110	0	85		
		2	355	355	87	87		2	353	353	60	60			
39,2	27,5	1	243	449	243	38	30	1	201	512	201	0	91		
		2	389	389	98	98		2	410	410	47	47			
43,7	45,0	1	291	514	291	68	31	1	241	621	241	0	97		
		2	448	448	133	133		2	495	495	56	56			
48,2	62,5	1	338	581	338	95	33	1	276	740	276	0	104		
		2	510	510	166	166		2	585	585	61	61			
52,7	82,5	1	392	656	392	129	34	1	320	869	320	0	110		
		2	579	579	206	206		2	685	685	70	70			
57,2	102,5	1	450	733	450	166	36	1	366	1006	366	0	118		
		2	650	650	249	249		2	790	790	79	79			
61,7	125,0	1	513	819	513	206	38	1	417	1157	417	0	126		
		2	730	730	296	296		2	907	907	89	89			
66,2	152,5	1	589	920	589	257	40	1	486	1322	486	0	134		
		2	823	823	354	354		2	1041	1041	106	106			

3.2.5.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

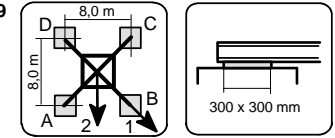


KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 30 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
16,7	0,0	1	147	257	147	37	23	1	90	179	90	2	51		
		2	225	225	69	69		2	153	153	28	28			
21,2	0,0	1	150	267	150	34	24	1	94	188	94	0	64		
		2	233	233	68	68		2	160	160	27	27			
25,7	0,0	1	154	278	154	29	25	1	95	200	95	0	71		
		2	242	242	66	66		2	179	179	98	98			
30,2	0,0	1	157	290	157	24	27	1	142	228	142	57	77		
		2	251	251	63	63		2	203	203	82	82			
34,7	0,0	1	161	303	161	18	28	1	146	262	146	30	83		
		2	262	262	60	60		2	228	228	64	64			
39,2	5,0	1	177	330	177	24	30	1	162	312	162	12	89		
		2	285	285	69	69		2	268	268	56	56			
43,7	12,5	1	199	364	199	35	31	1	181	375	181	0	95		
		2	316	316	83	83		2	317	317	52	52			
48,2	20,0	1	221	399	221	44	33	1	185	455	185	0	102		
		2	347	347	96	96		2	367	367	45	45			
52,7	32,5	1	257	448	257	66	34	1	213	544	213	0	108		
		2	392	392	122	122		2	434	434	50	50			
57,2	47,5	1	299	505	299	93	36	1	249	640	249	0	115		
		2	445	445	154	154		2	511	511	58	58			
61,7	62,5	1	344	565	344	123	38	1	285	745	285	0	123		
		2	500	500	187	187		2	592	592	66	66			
66,2	77,5	1	388	627	388	150	39	1	318	859	318	0	131		
		2	557	557	220	220		2	677	677	70	70			
70,7	97,5	1	446	702	446	189	41	1	369	984	369	0	140		
		2	627	627	264	264		2	779	779	82	82			
75,2	117,5	1	504	779	504	229	44	1	420	1115	420	0	149		
		2	698	698	309	309		2	883	883	94	94			

3.2.5.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

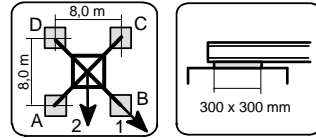


KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 35 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
16,7	0,0	1	155	259	155	51	23	1	90	179	90	2	51		
		2	228	228	81	81		2	153	153	28	28			
21,2	0,0	1	158	269	158	48	24	1	94	189	94	0	65		
		2	236	236	80	80		2	168	168	119	119			
25,7	0,0	1	162	280	162	43	26	1	147	207	147	87	71		
		2	245	245	78	78		2	189	189	104	104			
30,2	0,0	1	165	292	165	38	27	1	150	239	150	62	77		
		2	255	255	75	75		2	213	213	88	88			
34,7	0,0	1	169	305	169	32	28	1	154	273	154	34	84		
		2	265	265	72	72		2	238	238	69	69			
39,2	2,5	1	178	326	178	31	30	1	163	317	163	9	90		
		2	283	283	74	74		2	272	272	55	55			
43,7	10,0	1	201	360	201	42	31	1	180	383	180	0	96		
		2	313	313	88	88		2	321	321	50	50			
48,2	17,5	1	223	395	223	51	33	1	183	465	183	0	102		
		2	344	344	101	101		2	372	372	44	44			
52,7	30,0	1	259	444	259	73	34	1	210	554	210	0	109		
		2	390	390	128	128		2	440	440	48	48			
57,2	45,0	1	301	502	301	100	36	1	246	652	246	0	115		
		2	443	443	159	159		2	516	516	55	55			
61,7	62,5	1	352	568	352	135	38	1	294	759	294	0	124		
		2	505	505	199	199		2	605	605	68	68			
66,2	77,5	1	396	630	396	163	40	1	325	874	325	0	132		
		2	561	561	231	231		2	690	690	72	72			
70,7	97,5	1	453	706	453	201	41	1	376	1002	376	0	140		
		2	632	632	275	275		2	793	793	84	84			
75,2	117,5	1	511	782	511	240	44	1	426	1134	426	0	149		
		2	703	703	320	320		2	897	897	95	95			

3.2.5.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

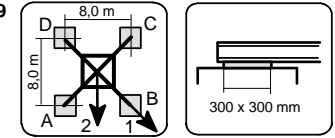


KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 40 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,7	0,0	1	158	267	158	50	23	1	90	180	90	1	52
		2	235	235	81	81		2	156	156	66	66	
21,2	0,0	1	162	277	162	46	24	1	147	191	147	102	66
		2	243	243	80	80		2	178	178	115	115	
25,7	0,0	1	165	289	165	42	26	1	150	221	150	79	72
		2	252	252	78	78		2	200	200	100	100	
30,2	0,0	1	169	301	169	36	27	1	154	253	154	54	78
		2	262	262	75	75		2	224	224	83	83	
34,7	0,0	1	172	314	172	30	29	1	157	288	157	26	84
		2	272	272	72	72		2	250	250	64	64	
39,2	0,0	1	176	328	176	23	30	1	155	332	155	0	91
		2	284	284	68	68		2	278	278	43	43	
43,7	7,5	1	198	363	198	33	31	1	162	408	162	0	97
		2	314	314	81	81		2	327	327	39	39	
48,2	20,0	1	233	411	233	55	33	1	190	491	190	0	103
		2	358	358	107	107		2	391	391	44	44	
52,7	35,0	1	275	467	275	83	34	1	228	582	228	0	110
		2	410	410	139	139		2	465	465	54	54	
57,2	50,0	1	317	524	317	109	36	1	263	681	263	0	116
		2	463	463	170	170		2	543	543	61	61	
61,7	65,0	1	361	585	361	138	38	1	298	789	298	0	124
		2	519	519	203	203		2	625	625	67	67	
66,2	82,5	1	412	653	412	171	40	1	341	906	341	0	132
		2	583	583	242	242		2	717	717	77	77	
70,7	100,0	1	463	723	463	203	42	1	378	1036	378	0	141
		2	647	647	279	279		2	814	814	82	82	
75,2	120,0	1	521	800	521	242	44	1	427	1169	427	0	150
		2	718	718	324	324		2	919	919	93	93	

3.2.5.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

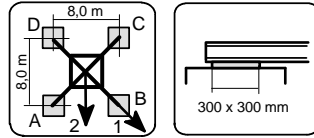


KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 45 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
16,7	0,0	1	166	275	166	57	23	1	113	200	113	26	52
		2	243	243	89	89		2	175	175	51	51	
21,2	0,0	1	169	286	169	53	24	1	116	210	116	23	66
		2	252	252	87	87		2	190	190	119	119	
25,7	0,0	1	173	297	173	49	26	1	158	235	158	81	73
		2	261	261	85	85		2	212	212	103	103	
30,2	0,0	1	176	310	176	43	27	1	161	268	161	55	79
		2	271	271	82	82		2	237	237	86	86	
34,7	0,0	1	180	323	180	37	29	1	165	303	165	26	85
		2	281	281	79	79		2	263	263	67	67	
39,2	0,0	1	183	338	183	29	30	1	163	348	163	0	91
		2	292	292	74	74		2	291	291	46	46	
43,7	7,5	1	206	372	206	39	32	1	169	425	169	0	98
		2	323	323	88	88		2	341	341	40	40	
48,2	20,0	1	240	421	240	60	33	1	196	510	196	0	104
		2	368	368	113	113		2	406	406	45	45	
52,7	35,0	1	282	477	282	88	34	1	234	602	234	0	110
		2	420	420	145	145		2	480	480	55	55	
57,2	50,0	1	325	535	325	114	36	1	267	703	267	0	117
		2	473	473	176	176		2	558	558	61	61	
61,7	65,0	1	369	596	369	142	38	1	302	813	302	0	125
		2	530	530	209	209		2	642	642	67	67	
66,2	82,5	1	420	665	420	175	40	1	344	932	344	0	133
		2	593	593	247	247		2	734	734	75	75	
70,7	102,5	1	477	742	477	212	42	1	392	1064	392	0	142
		2	664	664	290	290		2	838	838	86	86	
75,2	122,5	1	535	819	535	251	44	1	440	1200	440	0	151
		2	736	736	334	334		2	944	944	96	96	

3.2.5.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

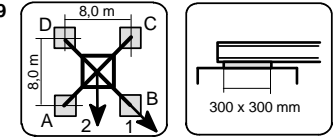


KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 50 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
16,7	0,0	1	169	279	169	59	23	1	113	212	113	15	53		
		2	246	246	91	91		2	183	183	44	44			
21,2	0,0	1	172	289	172	55	25	1	117	222	117	12	67		
		2	255	255	89	89		2	197	197	117	117			
25,7	0,0	1	176	301	176	51	26	1	161	244	161	77	73		
		2	264	264	87	87		2	220	220	102	102			
30,2	0,0	1	179	313	179	45	27	1	164	277	164	51	80		
		2	274	274	84	84		2	244	244	84	84			
34,7	0,0	1	183	327	183	38	29	1	168	313	168	22	86		
		2	285	285	81	81		2	270	270	65	65			
39,2	0,0	1	186	342	186	31	30	1	161	362	161	0	92		
		2	296	296	76	76		2	299	299	43	43			
43,7	7,5	1	208	376	208	41	32	1	167	441	167	0	98		
		2	327	327	90	90		2	349	349	38	38			
48,2	22,5	1	249	431	249	68	33	1	206	526	206	0	105		
		2	378	378	121	121		2	421	421	48	48			
52,7	35,0	1	285	481	285	89	35	1	230	620	230	0	111		
		2	424	424	146	146		2	489	489	51	51			
57,2	52,5	1	334	546	334	121	36	1	276	723	276	0	118		
		2	484	484	183	183		2	574	574	63	63			
61,7	67,5	1	378	607	378	149	38	1	309	833	309	0	126		
		2	540	540	216	216		2	658	658	68	68			
66,2	85,0	1	429	676	429	182	40	1	351	954	351	0	134		
		2	604	604	254	254		2	751	751	77	77			
70,7	105,0	1	486	753	486	219	42	1	398	1088	398	0	142		
		2	675	675	297	297		2	856	856	86	86			
75,2	125,0	1	544	831	544	257	44	1	446	1225	446	0	151		
		2	747	747	341	341		2	962	962	96	96			

3.2.5.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear



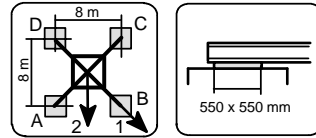
KR 1000 - 8 Corner distance 8,0 m x 8,0 m **jib 55 m**

Height under hook [m]	Centerballast [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
16,7	0,0	1	176	283	176	69	23	1	104	251	104	0	53		
		2	252	252	101	101		2	204	204	26	26			
21,2	0,0	1	180	294	180	66	25	1	105	264	105	0	68		
		2	261	261	99	99		2	212	212	25	25			
25,7	0,0	1	183	306	183	61	26	1	105	279	105	0	74		
		2	270	270	97	97		2	234	234	103	103			
30,2	0,0	1	187	318	187	55	28	1	103	295	103	0	80		
		2	280	280	94	94		2	259	259	85	85			
34,7	0,0	1	190	332	190	49	29	1	175	331	175	20	87		
		2	291	291	90	90		2	285	285	65	65			
39,2	0,0	1	194	347	194	41	30	1	166	384	166	0	93		
		2	302	302	86	86		2	315	315	43	43			
43,7	10,0	1	222	388	222	57	32	1	183	464	183	0	99		
		2	340	340	105	105		2	371	371	43	43			
48,2	22,5	1	257	437	257	77	33	1	209	552	209	0	105		
		2	384	384	130	130		2	437	437	47	47			
52,7	37,5	1	299	494	299	104	35	1	245	647	245	0	112		
		2	437	437	161	161		2	513	513	56	56			
57,2	52,5	1	341	553	341	130	36	1	277	752	277	0	119		
		2	491	491	192	192		2	592	592	60	60			
61,7	70,0	1	392	620	392	164	38	1	322	865	322	0	127		
		2	553	553	231	231		2	683	683	71	71			
66,2	87,5	1	443	690	443	196	40	1	362	988	362	0	135		
		2	617	617	268	268		2	777	777	79	79			
70,7	107,5	1	500	767	500	233	42	1	408	1124	408	0	143		
		2	689	689	311	311		2	882	882	88	88			
75,2	127,5	1	558	845	558	271	44	1	454	1264	454	0	152		
		2	761	761	355	355		2	990	990	96	96			

3.2.6.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



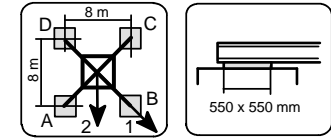
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 30 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	140	1	595	914	595	275	52	1	488	1304	488	0	169
			2	820	820	369	369		2	1031	1031	109	109	
82,1	82,5	145	1	621	947	621	294	53	1	513	1357	513	0	171
			2	851	851	390	390		2	1076	1076	116	116	
86,6	87,0	165	1	679	1028	679	329	56	1	550	1515	550	0	181
			2	926	926	431	431		2	1190	1190	118	118	
91,1	91,5	190	1	753	1126	753	379	58	1	614	1684	614	0	192
			2	1017	1017	488	488		2	1323	1323	132	132	
95,6	96,0	215	1	827	1226	827	427	61	1	669	1870	669	0	204
			2	1109	1109	544	544		2	1463	1463	141	141	
100,1	100,5	265	1	963	1390	963	536	63	1	782	2190	782	0	221
			2	1265	1265	661	661		2	1713	1713	164	164	
104,6	105,0	305	1	1075	1531	1075	619	66	1	886	2427	887	0	233
			2	1398	1398	752	752		2	1908	1908	192	192	

3.2.6.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



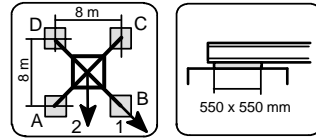
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 35 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	140	1	602	917	602	288	52	1	492	1326	492	0	170
			2	825	825	380	380		2	1047	1047	108	108	
82,1	82,5	145	1	628	950	628	307	53	1	517	1380	517	0	172
			2	856	856	401	401		2	1091	1091	115	115	
86,6	87,0	165	1	686	1032	686	341	56	1	553	1540	553	0	182
			2	930	930	442	442		2	1206	1206	117	117	
91,1	91,5	190	1	760	1130	761	391	58	1	616	1710	616	0	192
			2	1022	1022	499	499		2	1340	1340	131	131	
95,6	96,0	220	1	847	1242	847	452	61	1	695	1898	695	0	204
			2	1127	1127	567	567		2	1493	1493	151	151	
100,1	100,5	270	1	984	1407	984	560	63	1	805	2224	806	0	222
			2	1283	1283	684	684		2	1745	1745	172	172	
104,6	105,0	305	1	1083	1536	1083	630	66	1	884	2464	884	0	234
			2	1403	1403	762	762		2	1929	1929	186	186	

3.2.6.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



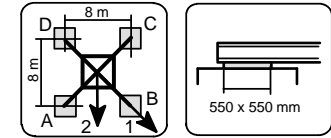
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 40 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	145	1	618	941	618	296	52	1	504	1366	504	0	171
			2	847	847	390	390		2	1076	1076	110	110	
82,1	82,5	150	1	644	974	644	315	54	1	529	1419	530	0	172
			2	877	877	411	411		2	1121	1121	118	118	
86,6	87,0	170	1	702	1056	702	349	56	1	565	1580	565	0	182
			2	952	952	452	452		2	1236	1236	118	118	
91,1	91,5	195	1	776	1154	776	398	58	1	627	1752	627	0	193
			2	1044	1044	509	509		2	1371	1371	132	132	
95,6	96,0	225	1	863	1267	863	459	61	1	705	1942	705	0	205
			2	1149	1149	577	577		2	1525	1525	151	151	
100,1	100,5	275	1	999	1432	1000	567	63	1	813	2273	813	0	223
			2	1305	1305	694	694		2	1778	1778	171	171	

3.2.6.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



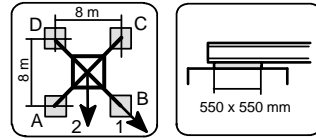
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 45 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	145	1	626	956	626	297	52	1	502	1400	502	0	171
			2	859	859	393	393		2	1096	1096	106	106	
82,1	82,5	150	1	652	988	652	316	54	1	528	1453	528	0	173
			2	890	890	414	414		2	1141	1141	113	113	
86,6	87,0	175	1	723	1083	723	362	56	1	587	1617	587	0	183
			2	977	977	468	468		2	1269	1269	126	126	
91,1	91,5	200	1	797	1182	797	411	59	1	648	1791	648	0	194
			2	1069	1069	524	524		2	1405	1405	138	138	
95,6	96,0	230	1	883	1296	883	471	61	1	725	1983	725	0	206
			2	1175	1175	592	592		2	1559	1559	157	157	
100,1	100,5	280	1	1020	1461	1020	579	64	1	829	2321	829	0	224
			2	1332	1332	708	708		2	1815	1815	174	174	

3.2.6.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



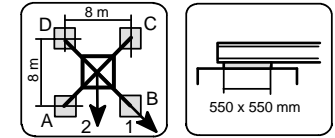
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 50 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	150	1	641	971	641	312	52	1	518	1429	519	0	172
			2	874	874	408	408		2	1122	1122	111	111	
82,1	82,5	155	1	667	1003	667	331	54	1	544	1481	544	0	174
			2	905	905	430	430		2	1166	1166	118	118	
86,6	87,0	180	1	738	1099	738	377	56	1	602	1647	603	0	184
			2	993	993	483	483		2	1295	1295	130	130	
91,1	91,5	205	1	812	1198	812	426	59	1	663	1822	663	0	195
			2	1085	1085	539	539		2	1431	1431	143	143	
95,6	96,0	230	1	886	1299	886	473	61	1	714	2016	715	0	207
			2	1178	1178	594	594		2	1574	1574	148	148	
100,1	100,5	285	1	1035	1477	1035	593	64	1	841	2358	841	0	225
			2	1348	1348	723	723		2	1844	1844	176	176	

3.2.6.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



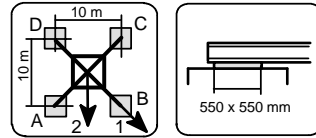
KR 16 - 80	Corner distance 8,0 m x 8,0 m	jib 55 m
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height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	155	1	662	991	662	332	52	1	538	1472	538	0	173
			2	894	894	429	429		2	1157	1157	116	116	
82,1	82,5	155	1	675	1011	675	340	54	1	539	1523	539	0	175
			2	912	912	438	438		2	1189	1189	111	111	
86,6	87,0	180	1	746	1106	746	385	56	1	596	1692	596	0	185
			2	1001	1001	491	491		2	1319	1319	122	122	
91,1	91,5	210	1	832	1218	832	446	59	1	680	1869	680	0	195
			2	1105	1105	559	559		2	1468	1468	146	146	
95,6	96,0	235	1	906	1320	906	493	61	1	730	2065	730	0	208
			2	1199	1199	614	614		2	1612	1612	151	151	
100,1	100,5	290	1	1055	1498	1055	612	64	1	853	2416	853	0	225
			2	1368	1368	742	742		2	1885	1885	176	176	

3.2.7.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



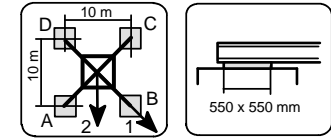
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 30 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	90	1	475	730	475	219	52	1	378	1043	378	0	169
			2	655	655	294	294		2	818	818	81	81	
82,1	82,5	95	1	501	762	501	240	53	1	409	1086	409	0	171
			2	685	685	316	316		2	860	860	92	92	
86,6	87,0	110	1	546	826	546	266	56	1	436	1212	436	0	181
			2	744	744	348	348		2	950	950	92	92	
91,1	91,5	130	1	608	907	608	309	58	1	492	1347	492	0	192
			2	819	819	396	396		2	1059	1059	106	106	
95,6	96,0	150	1	669	989	669	350	61	1	541	1496	541	0	204
			2	895	895	443	443		2	1173	1173	115	115	
100,1	100,5	190	1	781	1122	781	439	63	1	636	1752	636	0	221
			2	1022	1022	539	539		2	1375	1375	136	136	
104,6	105,0	220	1	867	1232	867	502	66	1	714	1941	714	0	233
			2	1126	1126	609	609		2	1529	1529	156	156	

3.2.7.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



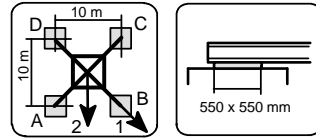
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 35 m**

height under hook [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Corner loads						Corner loads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
79,9	80,3	90	1	482	734	482	231	52	1	384	1061	385	0	170
			2	660	660	304	304		2	833	833	82	82	
82,1	82,5	95	1	508	766	508	251	53	1	415	1104	415	0	172
			2	690	690	327	327		2	874	874	93	93	
86,6	87,0	110	1	554	830	554	278	56	1	442	1232	442	0	182
			2	749	749	359	359		2	965	965	93	93	
91,1	91,5	130	1	615	911	615	320	58	1	497	1368	497	0	192
			2	824	824	406	406		2	1074	1074	107	107	
95,6	96,0	150	1	677	993	677	361	61	1	545	1518	545	0	204
			2	901	901	453	453		2	1189	1189	115	115	
100,1	100,5	190	1	789	1127	789	450	63	1	638	1779	638	0	222
			2	1028	1028	549	549		2	1393	1393	134	134	
104,6	105,0	220	1	875	1238	875	513	66	1	715	1971	715	0	234
			2	1131	1131	619	619		2	1547	1547	153	153	

3.2.7.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



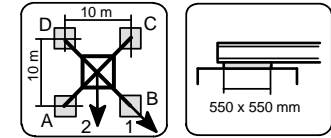
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 40 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	95	1	498	757	498	240	52	1	401	1092	401	0	171
			2	681	681	316	316		2	860	860	87	87	
82,1	82,5	95	1	512	775	512	248	54	1	406	1135	406	0	172
			2	698	698	325	325		2	888	888	85	85	
86,6	87,0	115	1	570	853	570	287	56	1	458	1264	458	0	182
			2	770	770	370	370		2	992	992	98	98	
91,1	91,5	135	1	631	934	631	329	58	1	512	1402	512	0	193
			2	845	845	418	418		2	1102	1102	111	111	
95,6	96,0	155	1	693	1016	693	369	61	1	559	1553	560	0	205
			2	922	922	464	464		2	1217	1217	119	119	
100,1	100,5	195	1	804	1151	805	458	63	1	650	1818	650	0	223
			2	1049	1049	560	560		2	1422	1422	137	137	
104,6	105,0	225	1	891	1261	891	521	66	1	726	2012	727	0	235
			2	1153	1153	629	629		2	1578	1578	155	155	

3.2.7.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



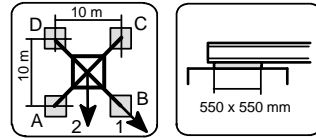
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 45 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	95	1	506	770	506	242	52	1	402	1120	402	0	171
			2	692	692	320	320		2	877	877	85	85	
82,1	82,5	100	1	532	801	532	263	54	1	433	1162	433	0	173
			2	722	722	342	342		2	918	918	96	96	
86,6	87,0	115	1	578	866	578	289	56	1	459	1293	459	0	183
			2	781	781	374	374		2	1010	1010	95	95	
91,1	91,5	135	1	639	948	639	331	59	1	512	1433	512	0	194
			2	857	857	421	421		2	1121	1121	107	107	
95,6	96,0	160	1	713	1043	713	383	61	1	584	1586	584	0	206
			2	946	946	480	480		2	1249	1249	127	127	
100,1	100,5	200	1	825	1178	825	472	64	1	671	1857	672	0	224
			2	1074	1074	575	575		2	1456	1456	143	143	
104,6	105,0	230	1	911	1289	911	534	66	1	746	2053	746	0	236
			2	1178	1178	644	644		2	1612	1612	160	160	

3.2.6.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.



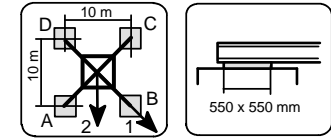
KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 50 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	100	1	521	785	521	258	52	1	421	1143	421	0	172
			2	708	708	335	335		2	901	901	92	92	
82,1	82,5	100	1	535	804	535	266	54	1	427	1185	428	0	174
			2	725	725	345	345		2	929	929	91	91	
86,6	87,0	120	1	593	881	593	304	56	1	477	1317	477	0	184
			2	797	797	389	389		2	1034	1034	102	102	
91,1	91,5	140	1	654	963	654	346	59	1	530	1458	530	0	195
			2	873	873	436	436		2	1145	1145	114	114	
95,6	96,0	160	1	716	1046	716	386	61	1	576	1612	576	0	207
			2	950	950	482	482		2	1261	1261	121	121	
100,1	100,5	205	1	840	1194	840	486	64	1	687	1887	687	0	225
			2	1090	1090	590	590		2	1482	1482	148	148	
104,6	105,0	230	1	914	1292	914	536	66	1	736	2085	736	0	237
			2	1182	1182	647	647		2	1626	1626	152	152	

3.2.7.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame without climbing gear

Attention!
for the **WOLFF 5520.6** only the section is valid for height under hook.

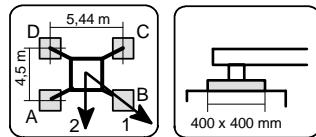


KR 16 - 100 Corner distance 10,0 m x 10,0 m **jib 55 m**

height under hook [m]	Center ballasts [m]	Center ballasts [t]	jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
				Corner loads						Corner loads				
				A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
79,9	80,3	100	1	529	792	529	266	52	1	420	1177	420	0	173
			2	715	715	343	343		2	920	920	88	88	
82,1	82,5	105	1	555	823	555	287	54	1	451	1218	451	0	175
			2	745	745	365	365		2	961	961	99	99	
86,6	87,0	125	1	613	902	613	325	56	1	500	1353	500	0	185
			2	817	817	409	409		2	1067	1067	110	110	
91,1	91,5	140	1	662	971	662	353	59	1	527	1495	527	0	195
			2	881	881	444	444		2	1166	1166	108	108	
95,6	96,0	165	1	736	1067	736	405	61	1	597	1652	597	0	208
			2	970	970	502	502		2	1296	1296	127	127	
100,1	100,5	205	1	848	1202	848	494	64	1	680	1932	680	0	225
			2	1098	1098	597	597		2	1506	1506	139	139	
104,6	105,0	235	1	934	1314	934	555	66	1	752	2134	752	0	238
			2	1203	1203	666	666		2	1664	1664	155	155	

3.3.1.1 Centralballasts and Cornerloads according to DIN 15019

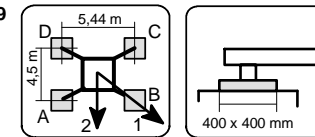
for a standing tower crane on a cross frame element without climbing gear



KRE 250														Corner distance 4,5 m x 5,44 m										jib 30 m	
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm								Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm								Horizontal force [kN]				
			Cornerloads										Cornerloads												
			A [kN]	B [kN]	C [kN]	D [kN]	A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]									
15,0	45,0	1	256	399	191	48	21	1	194	309	140	25	47	2	2	359	359	88	88	2	2	276	276	58	58
		2	359	359	88	88		2	276	276	58	58													
19,5	45,0	1	263	415	193	41	22	1	199	321	143	21	60	2	2	372	372	84	84	2	2	287	287	56	56
		2	372	372	84	84		2	287	287	56	56													
24,0	45,0	1	269	432	195	32	23	1	205	335	146	16	64	2	2	386	386	78	78	2	2	298	298	53	53
		2	386	386	78	78		2	298	298	53	53													
28,5	45,0	1	276	450	196	22	25	1	212	350	148	10	70	2	2	401	401	71	71	2	2	311	311	49	49
		2	401	401	71	71		2	311	311	49	49													

3.3.1.2 Centralballasts and Cornerloads according to DIN 15019

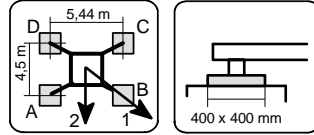
for a standing tower crane on a cross frame element without climbing gear



KRE 250														Corner distance 4,5 m x 5,44 m										jib 35 m	
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm								Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm								Horizontal force [kN]				
			Cornerloads										Cornerloads												
			A [kN]	B [kN]	C [kN]	D [kN]	A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]									
15,0	40,0	1	250	384	188	53	21	1	181	296	128	13	47	2	2	346	346	91	91	2	2	264	264	45	45
		2	346	346	91	91		2	264	264	45	45													
19,5	40,0	1	256	400	190	46	22	1	187	309	131	8	61	2	2	359	359	87	87	2	2	275	275	43	43
		2	359	359	87	87		2	275	275	43	43													
24,0	40,0	1	263	417	192	38	23	1	193	323	133	3	65	2	2	373	373	81	81	2	2	286	286	40	40
		2	373	373	81	81		2	286	286	40	40													
28,5	40,0	1	270	436	193	27	25	1	196	341	132	0	71	2	2	389	389	74	74	2	2	310	310	123	123
		2	389	389	74	74		2	310	310	123	123													

3.3.1.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

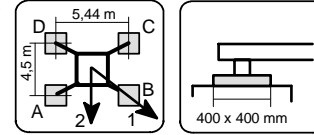


KRE 250 Corner distance 4,5 m x 5,44 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	40,0	1	255	396	190	49	21	1	181	297	128	12	47		
		2	356	356	88	88		2	264	264	45	45			
19,5	40,0	1	261	411	192	42	22	1	187	310	130	8	61		
		2	369	369	84	84		2	275	275	43	43			
24,0	40,0	1	268	429	194	33	24	1	193	324	133	3	66		
		2	383	383	78	78		2	288	288	143	143			
28,5	40,0	1	275	448	195	22	25	1	246	359	194	81	71		
		2	399	399	71	71		2	327	327	113	113			

3.3.1.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

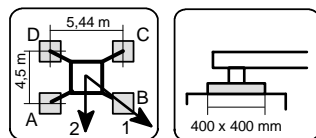


KRE 250 Corner distance 4,5 m x 5,44 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	37,5	1	256	398	191	49	21	1	197	309	145	32	48		
		2	358	358	89	89		2	278	278	64	64			
19,5	37,5	1	263	414	193	42	22	1	203	324	147	26	62		
		2	372	372	84	84		2	290	290	60	60			
24,0	37,5	1	270	432	195	33	24	1	209	339	149	19	66		
		2	386	386	78	78		2	303	303	56	56			
28,5	37,5	1	277	451	196	22	25	1	250	372	193	71	72		
		2	402	402	71	71		2	337	337	106	106			

3.3.1.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

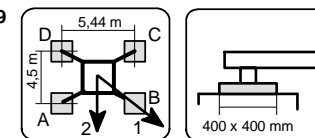


KRE 250 Corner distance 4,5 m x 5,44 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	37,5	1	259	402	194	51	21	1	201	328	142	15	49		
		2	362	362	91	91	2	292	292	51	51				
19,5	37,5	1	266	418	196	43	23	1	207	342	144	9	63		
		2	375	375	86	86	2	304	304	47	47				
24,0	37,5	1	273	436	197	34	24	1	213	358	146	1	67		
		2	390	390	80	80	2	317	317	42	42				
28,5	37,5	1	280	456	199	23	25	1	254	385	194	64	73		
		2	406	406	73	73	2	348	348	100	100				

3.3.1.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

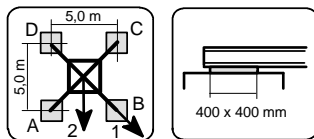


KRE 250 Corner distance 4,5 m x 5,44 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	35,0	1	260	399	196	57	21	1	170	402	94	0	49		
		2	360	360	96	96	2	321	321	12	12				
19,5	37,5	1	273	421	204	56	23	1	182	423	103	0	64		
		2	379	379	98	98	2	340	340	14	14				
24,0	40,0	1	286	445	212	53	24	1	193	447	110	0	68		
		2	400	400	98	98	2	360	360	15	15				
28,5	42,5	1	299	472	220	47	25	1	204	474	115	0	74		
		2	423	423	96	96	2	381	381	108	108				

3.3.2.1 Centralballasts and Cornerloads according to DIN 15019

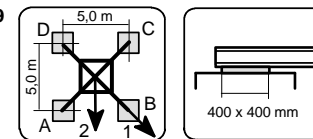
for a standing tower crane on a cross frame element without climbing gear



KRE 250		Corner distance 5,0 m x 5,0 m								jib 30 m			
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	37,5	1	205	377	205	32	21	1	148	287	148	9	47
		2	327	327	83	83	2	246	246	50	50		
19,5	37,5	1	209	392	209	26	22	1	153	300	153	5	60
		2	339	339	79	79	2	256	256	49	49		
24,0	37,5	1	213	409	213	18	23	1	157	313	157	0	64
		2	352	352	75	75	2	267	267	46	46		
28,5	37,5	1	218	427	218	8	25	1	155	333	155	0	70
		2	366	366	69	69	2	283	283	122	122		
33,0	40,0	1	228	454	228	2	26	1	213	374	213	52	76
		2	388	388	69	69	2	327	327	99	99		

3.3.2.2 Centralballasts and Cornerloads according to DIN 15019

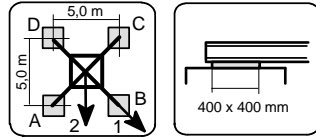
for a standing tower crane on a cross frame element without climbing gear



KRE 250		Corner distance 5,0 m x 5,0 m								jib 35 m			
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	30,0	1	194	356	194	31	21	1	120	278	120	0	47
		2	309	309	79	79	2	228	228	31	31		
19,5	30,0	1	198	372	198	25	22	1	120	295	120	0	61
		2	321	321	75	75	2	238	238	30	30		
24,0	30,0	1	202	388	202	16	23	1	119	314	119	0	65
		2	334	334	71	71	2	249	249	27	27		
28,5	30,0	1	207	407	207	6	25	1	117	335	117	0	71
		2	348	348	65	65	2	275	275	108	108		
33,0	37,5	1	230	446	230	13	26	1	215	381	215	48	77
		2	383	383	77	77	2	332	332	97	97		

3.3.2.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

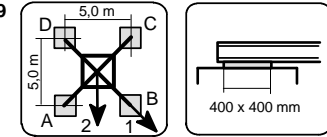


KRE 250 Corner distance 5,0 m x 5,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	32,5	1	203	374	203	33	21	1	132	279	132	0	47		
		2	324	324	83	83	2	234	234	37	37				
19,5	32,5	1	208	389	208	26	22	1	132	296	132	0	61		
		2	336	336	79	79	2	245	245	35	35				
24,0	32,5	1	212	406	212	18	24	1	131	315	131	0	66		
		2	349	349	75	75	2	262	262	132	132				
28,5	32,5	1	216	425	216	8	25	1	201	337	201	65	71		
		2	364	364	69	69	2	298	298	105	105				
33,0	32,5	1	216	450	216	0	26	1	206	390	206	21	77		
		2	380	380	61	61	2	336	336	75	75				

3.3.2.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

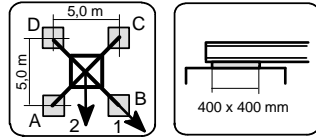


KRE 250 Corner distance 5,0 m x 5,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	30,0	1	205	376	205	34	21	1	152	288	152	16	48		
		2	326	326	84	84	2	248	248	56	56				
19,5	30,0	1	209	392	209	27	22	1	156	302	156	10	62		
		2	338	338	80	80	2	259	259	53	53				
24,0	30,0	1	214	409	214	18	24	1	161	318	161	3	66		
		2	352	352	75	75	2	272	272	49	49				
28,5	30,0	1	218	428	218	7	25	1	203	350	203	56	72		
		2	367	367	69	69	2	307	307	99	99				
33,0	30,0	1	217	455	217	0	26	1	207	404	207	10	78		
		2	383	383	61	61	2	346	346	68	68				

3.3.2.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

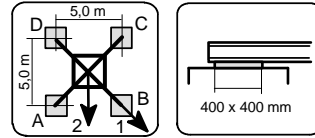


KRE 250 Corner distance 5,0 m x 5,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	27,5	1	201	374	201	29	21	1	139	307	139	0	49		
		2	323	323	80	80	2	255	255	38	38				
19,5	27,5	1	206	389	206	22	23	1	137	327	137	0	63		
		2	336	336	76	76	2	266	266	35	35				
24,0	27,5	1	210	407	210	13	24	1	135	350	135	0	67		
		2	349	349	71	71	2	278	278	31	31				
28,5	27,5	1	214	426	214	2	25	1	131	375	131	0	73		
		2	364	364	64	64	2	311	311	88	88				
33,0	27,5	1	208	458	208	0	27	1	199	416	199	0	79		
		2	381	381	56	56	2	350	350	57	57				

3.3.2.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

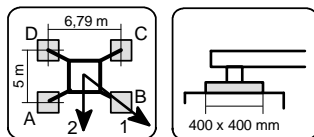


KRE 250 Corner distance 5,0 m x 5,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	27,5	1	209	377	209	42	21	1	98	394	98	0	49		
		2	328	328	91	91	2	287	287	8	8				
19,5	30,0	1	220	399	220	41	23	1	109	415	109	0	64		
		2	346	346	93	93	2	305	305	12	12				
24,0	32,5	1	230	423	230	38	24	1	118	438	118	0	68		
		2	367	367	94	94	2	324	324	14	14				
28,5	35,0	1	241	449	241	33	25	1	126	465	126	0	74		
		2	388	388	94	94	2	348	348	103	103				
33,0	37,5	1	251	477	251	26	27	1	132	494	132	0	80		
		2	411	411	92	92	2	395	395	78	78				

3.3.3.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

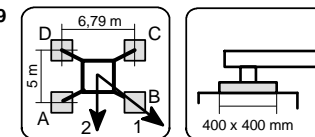


KRE 260.1 Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
10,5	35,0	1	244	345	159	58	21	1	180	261	111	29	45		
		2	317	317	86	86		2	239	239	52	52			
15,0	35,0	1	252	358	161	55	22	1	186	273	114	28	50		
		2	329	329	84	84		2	249	249	51	51			
19,5	35,0	1	258	371	162	49	24	1	192	283	115	24	64		
		2	340	340	80	80		2	258	258	49	49			
24,0	35,0	1	264	385	163	42	25	1	198	295	116	19	69		
		2	352	352	75	75		2	268	268	46	46			
28,5	35,0	1	271	400	163	34	27	1	204	307	117	14	75		
		2	365	365	69	69		2	285	285	119	119			
33,0	40,0	1	291	430	175	36	28	1	261	363	175	73	81		
		2	391	391	75	75		2	335	335	101	101			
37,5	50,0	1	324	473	199	50	30	1	303	438	190	55	87		
		2	431	431	92	92		2	401	401	92	92			
42,0	62,5	1	364	524	229	69	31	1	353	524	209	39	93		
		2	479	479	113	113		2	477	477	86	86			
46,5	75,0	1	405	576	260	88	33	1	406	615	229	19	100		
		2	529	529	135	135		2	557	557	77	77			

3.3.3.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

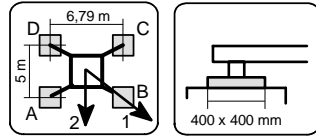


KRE 260.1 Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
10,5	30,0	1	237	332	157	62	21	1	167	249	98	16	46		
		2	305	305	88	88		2	226	226	39	39			
15,0	30,0	1	244	345	159	59	23	1	174	260	101	15	51		
		2	317	317	87	87		2	236	236	39	39			
19,5	30,0	1	251	358	160	53	24	1	180	271	102	11	65		
		2	328	328	83	83		2	246	246	36	36			
24,0	30,0	1	257	372	160	46	25	1	186	283	103	6	69		
		2	340	340	78	78		2	256	256	33	33			
28,5	30,0	1	264	387	160	37	27	1	229	305	165	90	75		
		2	353	353	71	71		2	284	284	111	111			
33,0	35,0	1	284	416	172	40	28	1	258	363	169	63	82		
		2	380	380	77	77		2	334	334	92	92			
37,5	47,5	1	323	466	203	60	30	1	307	445	190	51	88		
		2	426	426	100	100		2	407	407	89	89			
42,0	60,0	1	363	517	233	79	31	1	357	531	209	34	94		
		2	474	474	121	121		2	483	483	83	83			
46,5	72,5	1	404	570	263	97	33	1	409	623	228	14	101		
		2	524	524	143	143		2	564	564	73	73			

3.3.3.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

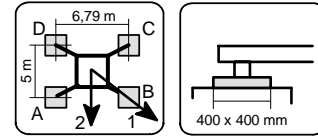


KRE 260.1 Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
10,5	30,0	1	242	342	158	59	21	1	167	249	98	16	46	
		2	314	314	87	87		2	226	226	39	39		
15,0	30,0	1	250	355	161	55	23	1	174	261	101	14	51	
		2	326	326	85	85		2	237	237	38	38		
19,5	30,0	1	256	368	161	49	24	1	180	272	102	10	65	
		2	337	337	80	80		2	246	246	36	36		
24,0	30,0	1	263	382	162	42	26	1	186	283	103	6	70	
		2	349	349	75	75		2	265	265	130	130		
28,5	30,0	1	270	398	162	34	27	1	237	323	164	78	76	
		2	362	362	69	69		2	300	300	102	102		
33,0	32,5	1	284	421	167	30	28	1	260	376	161	44	82	
		2	383	383	68	68		2	344	344	77	77		
37,5	42,5	1	316	465	191	43	30	1	302	453	176	25	89	
		2	424	424	84	84		2	411	411	67	67		
42,0	55,0	1	356	516	221	61	31	1	353	540	195	8	95	
		2	472	472	106	106		2	488	488	60	60		
46,5	75,0	1	416	588	270	98	33	1	424	651	232	5	101	
		2	541	541	146	146		2	588	588	68	68		

3.3.3.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

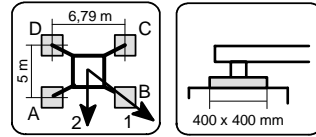


KRE 260.1 Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
10,5	27,5	1	244	344	160	60	21	1	182	261	115	37	47	
		2	316	316	87	87		2	239	239	58	58		
15,0	27,5	1	251	357	162	56	23	1	189	274	118	34	52	
		2	328	328	85	85		2	250	250	57	57		
19,5	27,5	1	258	371	163	50	24	1	195	286	119	29	66	
		2	339	339	81	81		2	261	261	54	54		
24,0	27,5	1	265	385	163	42	26	1	202	299	120	22	71	
		2	352	352	76	76		2	273	273	124	124		
28,5	27,5	1	272	401	163	33	27	1	241	334	163	70	77	
		2	365	365	69	69		2	309	309	96	96		
33,0	27,5	1	279	418	162	23	29	1	258	382	153	30	83	
		2	380	380	62	62		2	348	348	64	64		
37,5	40,0	1	319	468	192	43	30	1	307	465	174	16	89	
		2	427	427	84	84		2	421	421	60	60		
42,0	55,0	1	365	527	228	66	31	1	364	559	199	4	96	
		2	482	482	111	111		2	505	505	58	58		
46,5	75,0	1	425	599	277	103	33	1	436	672	236	0	102	
		2	551	551	151	151		2	606	606	66	66		

3.3.3.5 Centralballasts and Cornerloads according to DIN 15019

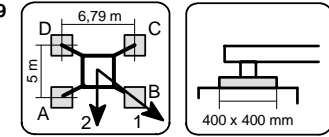
for a standing tower crane on a cross frame element without climbing gear



KRE 260.1											Corner distance 5,0 m x 6,79 m											jib 50 m										
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]																	
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]																		
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]																			
10,5	27,5	1	247	347	162	62	22	1	187	277	111	22	47																			
		2	319	319	90	90		2	252	252	47	47																				
15,0	27,5	1	254	361	165	58	23	1	194	289	114	19	52																			
		2	331	331	88	88		2	263	263	45	45																				
19,5	27,5	1	261	374	165	52	25	1	200	302	115	14	67																			
		2	343	343	83	83		2	274	274	42	42																				
24,0	27,5	1	268	389	165	44	26	1	207	315	116	7	71																			
		2	355	355	78	78		2	285	285	37	37																				
28,5	27,5	1	275	405	165	35	27	1	247	346	163	64	78																			
		2	369	369	71	71		2	319	319	91	91																				
33,0	27,5	1	282	422	164	25	29	1	264	394	153	23	84																			
		2	384	384	63	63		2	358	358	59	59																				
37,5	37,5	1	316	466	188	37	30	1	307	472	167	2	90																			
		2	425	425	79	79		2	426	426	48	48																				
42,0	57,5	1	374	537	237	74	32	1	376	579	205	2	96																			
		2	492	492	119	119		2	523	523	58	58																				
46,5	80,0	1	441	616	292	116	33	1	454	699	248	4	103																			
		2	568	568	165	165		2	631	631	72	72																				

3.3.3.6 Centralballasts and Cornerloads according to DIN 15019

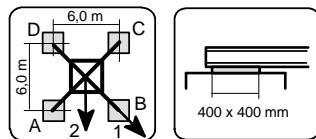
for a standing tower crane on a cross frame element without climbing gear



KRE 260.1											Corner distance 5,0 m x 6,79 m											jib 55 m										
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]																	
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]																		
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]																			
10,5	25,0	1	247	345	165	68	22	1	173	331	75	0	48																			
		2	318	318	95	95		2	278	278	11	11																				
15,0	25,0	1	255	358	167	64	23	1	177	347	74	0	53																			
		2	330	330	92	92		2	289	289	10	10																				
19,5	27,5	1	267	378	174	63	25	1	190	365	82	0	68																			
		2	347	347	94	94		2	306	306	12	12																				
24,0	30,0	1	281	399	180	62	26	1	203	385	88	0	72																			
		2	366	366	95	95		2	324	324	14	14																				
28,5	32,5	1	294	421	186	59	28	1	214	408	93	0	78																			
		2	386	386	94	94		2	350	350	101	101																				
33,0	35,0	1	308	445	192	55	29	1	294	435	176	35	85																			
		2	407	407	93	93		2	396	396	74	74																				
37,5	40,0	1	329	477	203	55	30	1	325	501	177	1	91																			
		2	436	436	96	96		2	452	452	50	50																				
42,0	60,0	1	387	548	252	90	32	1	395	610	214	0	97																			
		2	504	504	135	135		2	550	550	59	59																				
46,5	82,5	1	454	628	307	133	33	1	474	730	257	1	104																			
		2	580	580	181	181		2	659	659	72	72																				

3.3.4.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

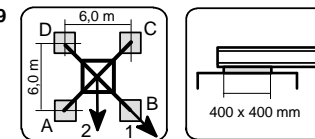


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	20,0	1	164	300	164	28	21	1	105	220	105	0	45
		2	260	260	68	68		2	185	185	30	30	
15,0	20,0	1	169	313	169	25	22	1	109	232	109	0	50
		2	271	271	67	67		2	195	195	30	30	
19,5	20,0	1	173	325	173	20	24	1	109	246	109	0	64
		2	281	281	64	64		2	203	203	29	29	
24,0	20,0	1	176	339	176	13	25	1	108	262	108	0	69
		2	291	291	61	61		2	212	212	27	27	
28,5	20,0	1	180	354	180	5	27	1	107	279	107	0	75
		2	303	303	56	56		2	234	234	95	95	
33,0	25,0	1	196	382	196	9	28	1	181	319	181	42	81
		2	327	327	64	64		2	278	278	83	83	
37,5	32,5	1	218	418	218	17	30	1	203	385	203	21	87
		2	359	359	76	76		2	331	331	74	74	
42,0	45,0	1	253	468	253	37	31	1	238	468	238	7	93
		2	405	405	100	100		2	400	400	75	75	
46,5	55,0	1	282	514	282	50	33	1	251	566	251	0	100
		2	446	446	118	118		2	467	467	67	67	

3.3.4.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

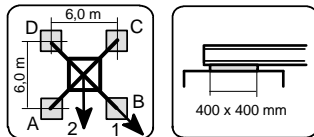


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	15,0	1	159	287	159	32	21	1	80	221	80	0	46
		2	250	250	69	69		2	173	173	17	17	
15,0	15,0	1	164	300	164	29	23	1	84	233	84	0	51
		2	260	260	68	68		2	182	182	18	18	
19,5	15,0	1	168	312	168	23	24	1	84	247	84	0	65
		2	270	270	66	66		2	191	191	16	16	
24,0	15,0	1	171	326	171	17	25	1	83	263	83	0	69
		2	281	281	62	62		2	203	203	110	110	
28,5	15,0	1	175	341	175	9	27	1	81	280	81	0	75
		2	292	292	57	57		2	232	232	88	88	
33,0	22,5	1	197	376	197	18	28	1	182	325	182	40	82
		2	323	323	71	71		2	283	283	81	81	
37,5	30,0	1	219	412	219	27	30	1	204	391	204	17	88
		2	355	355	83	83		2	337	337	72	72	
42,0	42,5	1	254	462	254	46	31	1	239	475	239	3	94
		2	401	401	107	107		2	406	406	72	72	
46,5	52,5	1	284	508	284	59	33	1	248	578	248	0	101
		2	442	442	125	125		2	473	473	64	64	

3.3.4.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

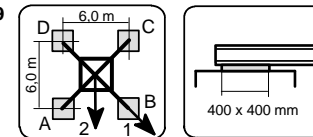


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	17,5	1	169	303	169	35	21	1	92	221	92	0	46
		2	264	264	74	74		2	180	180	23	23	
15,0	17,5	1	174	316	174	32	23	1	96	234	96	0	51
		2	274	274	73	73		2	189	189	24	24	
19,5	17,5	1	177	329	177	26	24	1	96	248	96	0	65
		2	284	284	71	71		2	198	198	127	127	
24,0	17,5	1	181	342	181	20	26	1	95	264	95	0	70
		2	295	295	67	67		2	222	222	110	110	
28,5	17,5	1	184	357	184	12	27	1	169	286	169	53	76
		2	307	307	62	62		2	252	252	87	87	
33,0	17,5	1	188	374	188	2	28	1	173	330	173	15	82
		2	319	319	57	57		2	284	284	62	62	
37,5	27,5	1	216	416	216	16	30	1	200	405	200	0	89
		2	358	358	75	75		2	345	345	58	58	
42,0	37,5	1	245	461	245	29	31	1	208	505	208	0	95
		2	398	398	92	92		2	408	408	51	51	
46,5	52,5	1	287	520	287	54	33	1	237	613	237	0	101
		2	451	451	123	123		2	489	489	55	55	

3.3.4.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

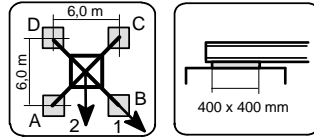


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	15,0	1	171	305	171	36	21	1	118	224	118	11	47
		2	266	266	75	75		2	193	193	42	42	
15,0	15,0	1	175	318	175	32	23	1	122	236	122	9	52
		2	277	277	74	74		2	203	203	42	42	
19,5	15,0	1	179	331	179	27	24	1	83	249	83	0	66
		2	287	287	71	71		2	212	212	40	40	
24,0	15,0	1	182	345	182	20	26	1	82	265	82	0	71
		2	297	297	67	67		2	230	230	105	105	
28,5	15,0	1	186	360	186	12	27	1	171	296	171	45	77
		2	309	309	63	63		2	260	260	82	82	
33,0	15,0	1	189	377	189	2	29	1	174	342	174	7	83
		2	322	322	57	57		2	293	293	56	56	
37,5	22,5	1	212	414	212	10	30	1	180	426	180	0	89
		2	355	355	69	69		2	347	347	46	46	
42,0	37,5	1	253	471	253	34	31	1	212	527	212	0	96
		2	407	407	98	98		2	424	424	51	51	
46,5	52,5	1	295	530	295	59	33	1	241	637	241	0	102
		2	461	461	128	128		2	505	505	54	54	

3.3.4.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

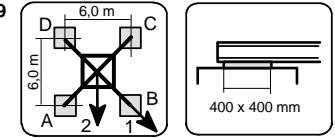


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	12,5	1	167	303	167	32	22	1	103	242	103	0	47
		2	263	263	71	71		2	197	197	26	26	
15,0	12,5	1	172	316	172	28	23	1	105	257	105	0	52
		2	274	274	70	70		2	207	207	26	26	
19,5	12,5	1	175	329	175	22	25	1	104	273	104	0	67
		2	284	284	67	67		2	217	217	24	24	
24,0	12,5	1	179	343	179	15	26	1	101	292	101	0	71
		2	295	295	63	63		2	232	232	96	96	
28,5	15,0	1	189	364	189	13	27	1	111	313	111	0	78
		2	313	313	65	65		2	268	268	79	79	
33,0	15,0	1	192	381	192	4	29	1	177	353	177	1	84
		2	326	326	59	59		2	302	302	53	53	
37,5	22,5	1	214	418	214	11	30	1	176	445	176	0	90
		2	358	358	71	71		2	357	357	42	42	
42,0	37,5	1	255	475	255	35	32	1	207	548	207	0	96
		2	411	411	100	100		2	434	434	47	47	
46,5	55,0	1	304	541	304	66	33	1	248	659	248	0	103
		2	472	472	136	136		2	522	522	56	56	

3.3.4.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

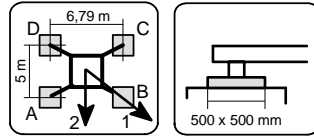


KRE 260.1 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
10,5	15,0	1	181	312	181	50	22	1	82	314	82	0	48
		2	274	274	88	88		2	231	231	9	9	
15,0	15,0	1	186	326	186	46	23	1	84	329	84	0	53
		2	285	285	87	87		2	241	241	8	8	
19,5	17,5	1	196	345	196	46	25	1	95	346	95	0	68
		2	301	301	90	90		2	257	257	12	12	
24,0	17,5	1	199	359	199	39	26	1	93	365	93	0	72
		2	312	312	86	86		2	267	267	9	9	
28,5	20,0	1	209	381	209	37	28	1	102	387	102	0	78
		2	331	331	87	87		2	298	298	90	90	
33,0	22,5	1	219	404	219	33	29	1	109	410	109	0	85
		2	350	350	88	88		2	338	338	70	70	
37,5	25,0	1	228	429	228	28	30	1	190	474	190	0	91
		2	370	370	87	87		2	381	381	46	46	
42,0	40,0	1	269	487	269	52	32	1	220	579	220	0	97
		2	423	423	116	116		2	459	459	50	50	
46,5	57,5	1	318	553	318	83	33	1	259	692	259	0	104
		2	484	484	152	152		2	548	548	58	58	

3.3.5.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

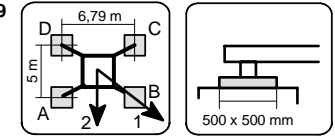


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	30,0	1	248	355	158	51	23	1	183	269	110	23	51		
		2	325	325	80	80		2	245	245	47	47			
19,5	30,0	1	255	369	160	46	24	1	190	281	112	21	65		
		2	337	337	78	78		2	256	256	46	46			
24,0	30,0	1	262	383	160	39	26	1	196	293	114	16	69		
		2	349	349	73	73		2	266	266	43	43			
28,5	30,0	1	269	398	160	31	27	1	202	305	114	11	76		
		2	362	362	67	67		2	284	284	115	115			
33,0	35,0	1	289	427	172	35	29	1	259	362	172	69	82		
		2	388	388	73	73		2	333	333	98	98			
37,5	45,0	1	321	469	197	49	30	1	301	436	187	52	88		
		2	428	428	90	90		2	399	399	89	89			
42,0	57,5	1	361	520	227	68	31	1	351	522	207	36	94		
		2	476	476	112	112		2	474	474	83	83			
46,5	72,5	1	407	578	263	91	33	1	408	618	231	22	101		
		2	531	531	139	139		2	560	560	80	80			
51,0	87,5	1	454	638	298	113	34	1	467	719	255	3	107		
		2	587	587	164	164		2	649	649	73	73			
55,5	112,5	1	527	726	359	160	36	1	553	851	302	5	113		
		2	671	671	215	215		2	768	768	87	87			

3.3.5.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

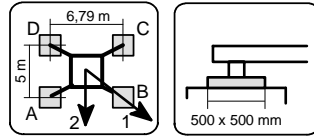


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	22,5	1	234	335	149	48	23	1	164	250	91	4	51		
		2	307	307	76	76		2	226	226	28	28			
19,5	22,5	1	242	349	151	44	24	1	171	263	94	2	65		
		2	319	319	74	74		2	237	237	27	27			
24,0	22,5	1	248	363	152	37	26	1	174	277	92	0	70		
		2	331	331	69	69		2	247	247	24	24			
28,5	22,5	1	255	378	152	29	27	1	221	297	156	80	76		
		2	344	344	63	63		2	276	276	101	101			
33,0	32,5	1	288	420	176	44	29	1	262	368	172	66	82		
		2	383	383	81	81		2	339	339	96	96			
37,5	42,5	1	321	463	201	59	30	1	304	443	187	48	89		
		2	423	423	98	98		2	405	405	87	87			
42,0	55,0	1	360	513	231	77	32	1	354	529	207	32	95		
		2	471	471	120	120		2	480	480	80	80			
46,5	70,0	1	406	572	266	101	33	1	412	626	231	17	101		
		2	526	526	147	147		2	566	566	76	76			
51,0	87,5	1	459	639	308	128	34	1	477	734	260	3	107		
		2	589	589	178	178		2	663	663	75	75			
55,5	112,5	1	532	726	369	175	36	1	564	867	308	4	114		
		2	673	673	229	229		2	783	783	88	88			

3.3.5.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

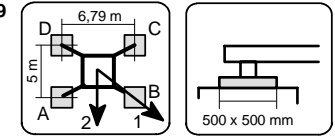


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	25,0	1	246	351	157	51	23	1	170	257	97	10	52		
		2	322	322	81	81		2	233	233	34	34			
19,5	25,0	1	254	366	159	47	25	1	177	270	100	8	66		
		2	335	335	78	78		2	244	244	33	33			
24,0	25,0	1	260	380	159	40	26	1	183	281	101	3	71		
		2	347	347	73	73		2	263	263	126	126			
28,5	25,0	1	267	395	159	31	27	1	235	322	162	74	77		
		2	360	360	67	67		2	298	298	99	99			
33,0	27,5	1	281	418	165	28	29	1	257	375	159	41	83		
		2	380	380	66	66		2	342	342	74	74			
37,5	37,5	1	314	461	189	42	30	1	300	450	173	23	89		
		2	420	420	83	83		2	409	409	64	64			
42,0	52,5	1	360	518	225	66	32	1	356	543	199	12	96		
		2	474	474	110	110		2	491	491	64	64			
46,5	70,0	1	412	584	267	96	33	1	420	647	229	2	102		
		2	536	536	143	143		2	584	584	65	65			
51,0	92,5	1	478	664	321	135	35	1	499	769	270	0	108		
		2	612	612	187	187		2	694	694	75	75			
55,5	117,5	1	551	752	382	181	36	1	585	903	318	0	115		
		2	696	696	237	237		2	815	815	88	88			

3.3.5.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

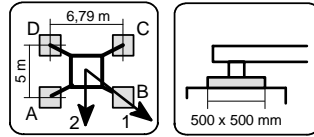


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	22,5	1	248	354	158	52	23	1	186	270	114	30	52		
		2	324	324	81	81		2	247	247	53	53			
19,5	22,5	1	255	368	160	47	25	1	193	284	116	26	67		
		2	337	337	78	78		2	259	259	51	51			
24,0	22,5	1	262	383	160	40	26	1	199	297	117	20	72		
		2	349	349	73	73		2	272	272	121	121			
28,5	22,5	1	269	398	160	31	28	1	239	333	160	67	78		
		2	362	362	67	67		2	307	307	93	93			
33,0	22,5	1	277	415	160	21	29	1	256	380	151	27	84		
		2	377	377	60	60		2	346	346	61	61			
37,5	35,0	1	316	465	190	41	30	1	305	463	171	13	90		
		2	424	424	82	82		2	419	419	57	57			
42,0	50,0	1	362	522	226	66	32	1	361	556	197	2	96		
		2	478	478	110	110		2	502	502	56	56			
46,5	72,5	1	427	601	280	107	33	1	438	674	239	4	103		
		2	553	553	155	155		2	608	608	69	69			
51,0	95,0	1	493	681	334	146	35	1	517	797	280	0	109		
		2	629	629	198	198		2	719	719	78	78			
55,5	120,0	1	566	770	395	191	36	1	603	933	326	0	115		
		2	713	713	248	248		2	841	841	90	90			

3.3.5.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

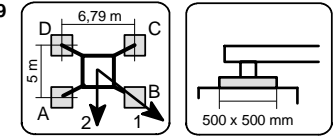


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	20,0	1	244	351	154	48	23	1	184	280	104	9	53		
		2	321	321	77	77		2	253	253	35	35			
19,5	20,0	1	252	366	156	43	25	1	192	293	106	5	68		
		2	334	334	74	74		2	265	265	33	33			
24,0	20,0	1	259	380	157	35	26	1	197	308	105	0	72		
		2	346	346	69	69		2	277	277	28	28			
28,5	20,0	1	266	396	157	27	28	1	238	338	154	54	78		
		2	360	360	63	63		2	311	311	82	82			
33,0	22,5	1	280	419	162	23	29	1	261	392	151	20	85		
		2	381	381	61	61		2	356	356	56	56			
37,5	35,0	1	319	469	192	42	31	1	310	476	171	6	91		
		2	427	427	84	84		2	430	430	52	52			
42,0	52,5	1	371	533	235	73	32	1	373	576	203	0	97		
		2	488	488	118	118		2	520	520	56	56			
46,5	75,0	1	437	612	289	114	33	1	451	694	245	1	103		
		2	563	563	162	162		2	627	627	69	69			
51,0	97,5	1	503	692	342	153	35	1	526	821	283	0	110		
		2	640	640	205	205		2	738	738	77	77			
55,5	122,5	1	576	781	403	198	36	1	612	959	327	0	116		
		2	724	724	255	255		2	861	861	88	88			

3.3.5.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

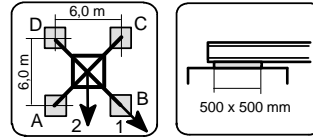


KRE 260.2 Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	22,5	1	257	361	170	66	24	1	182	347	79	0	53		
		2	332	332	95	95		2	292	292	12	12			
19,5	22,5	1	265	376	172	61	25	1	185	365	77	0	69		
		2	345	345	92	92		2	304	304	10	10			
24,0	25,0	1	278	396	178	60	27	1	198	385	83	0	73		
		2	364	364	92	92		2	322	322	11	11			
28,5	27,5	1	291	419	184	57	28	1	209	407	88	0	79		
		2	383	383	92	92		2	348	348	98	98			
33,0	30,0	1	305	442	190	53	29	1	292	433	173	32	86		
		2	404	404	91	91		2	394	394	71	71			
37,5	37,5	1	332	480	207	60	31	1	329	505	181	5	92		
		2	439	439	101	101		2	456	456	54	54			
42,0	55,0	1	384	544	250	90	32	1	390	608	210	0	98		
		2	500	500	134	134		2	547	547	57	57			
46,5	77,5	1	450	623	304	130	34	1	468	727	252	0	104		
		2	575	575	178	178		2	655	655	69	69			
51,0	102,5	1	522	710	363	175	35	1	554	858	299	0	110		
		2	658	658	227	227		2	773	773	82	82			
55,5	127,5	1	596	800	424	220	37	1	638	999	342	0	117		
		2	743	743	276	276		2	897	897	92	92			

3.3.6.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

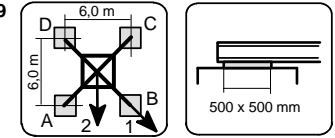


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	15,0	1	165	309	165	21	23	1	101	233	101	0	51		
		2	267	267	63	63		2	191	191	26	26			
19,5	15,0	1	170	323	170	17	24	1	104	247	104	0	65		
		2	278	278	62	62		2	201	201	26	26			
24,0	15,0	1	174	336	174	11	26	1	103	262	103	0	69		
		2	289	289	58	58		2	210	210	24	24			
28,5	15,0	1	177	351	177	3	27	1	101	279	101	0	76		
		2	300	300	54	54		2	232	232	92	92			
33,0	20,0	1	193	379	193	7	29	1	178	317	178	39	82		
		2	325	325	62	62		2	276	276	80	80			
37,5	30,0	1	222	421	222	22	30	1	207	389	207	24	88		
		2	363	363	80	80		2	336	336	77	77			
42,0	40,0	1	250	465	250	36	31	1	235	465	235	5	94		
		2	402	402	98	98		2	398	398	72	72			
46,5	50,0	1	279	510	279	48	33	1	244	565	244	0	101		
		2	442	442	115	115		2	463	463	64	64			
51,0	65,0	1	320	569	320	70	34	1	269	679	269	0	107		
		2	496	496	143	143		2	545	545	64	64			
55,5	82,5	1	368	636	368	99	36	1	304	803	304	0	113		
		2	558	558	178	178		2	637	637	69	69			
60,0	102,5	1	425	713	425	137	38	1	352	937	352	0	121		
		2	629	629	221	221		2	741	741	79	79			
64,5	125,0	1	488	798	488	178	40	1	405	1083	405	0	129		
		2	707	707	269	269		2	856	856	90	90			

3.3.6.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

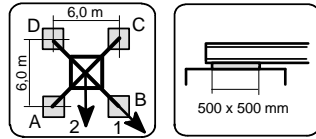


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,0	10,0	1	160	296	160	24	23	1	75	234	75	0	51		
		2	257	257	64	64		2	179	179	14	14			
19,5	10,0	1	165	310	165	21	24	1	78	248	78	0	65		
		2	268	268	63	63		2	189	189	13	13			
24,0	10,0	1	169	324	169	14	26	1	78	263	78	0	70		
		2	278	278	59	59		2	201	201	107	107			
28,5	10,0	1	172	338	172	7	27	1	76	280	76	0	76		
		2	290	290	55	55		2	230	230	84	84			
33,0	17,5	1	195	373	195	17	29	1	180	323	180	36	82		
		2	320	320	69	69		2	281	281	78	78			
37,5	27,5	1	223	415	223	31	30	1	208	395	208	21	89		
		2	359	359	88	88		2	341	341	76	76			
42,0	37,5	1	252	458	252	45	32	1	237	472	237	1	95		
		2	398	398	105	105		2	403	403	70	70			
46,5	47,5	1	280	504	280	57	33	1	241	577	241	0	101		
		2	438	438	122	122		2	469	469	61	61			
51,0	62,5	1	321	563	321	79	34	1	266	693	266	0	107		
		2	492	492	150	150		2	551	551	61	61			
55,5	82,5	1	376	637	376	114	36	1	312	818	312	0	114		
		2	561	561	191	191		2	650	650	71	71			
60,0	102,5	1	433	714	433	151	38	1	358	954	358	0	122		
		2	632	632	234	234		2	755	755	80	80			
64,5	125,0	1	496	800	496	193	40	1	411	1102	411	0	130		
		2	711	711	281	281		2	871	871	91	91			

3.3.6.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

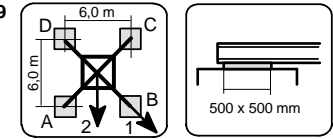


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	12,5	1	170	312	170	28	23	1	88	234	88	0	52
		2	271	271	69	69		2	185	185	20	20	
19,5	12,5	1	175	326	175	24	25	1	90	249	90	0	66
		2	282	282	68	68		2	196	196	124	124	
24,0	12,5	1	178	340	178	17	26	1	89	264	89	0	71
		2	293	293	64	64		2	220	220	107	107	
28,5	12,5	1	182	355	182	9	27	1	167	284	167	50	77
		2	304	304	60	60		2	250	250	84	84	
33,0	15,0	1	192	377	192	7	29	1	177	335	177	19	83
		2	323	323	61	61		2	289	289	65	65	
37,5	22,5	1	214	413	214	15	30	1	195	406	195	0	89
		2	355	355	73	73		2	343	343	55	55	
42,0	32,5	1	242	457	242	28	32	1	203	504	203	0	96
		2	394	394	91	91		2	406	406	49	49	
46,5	50,0	1	290	521	290	58	33	1	244	612	244	0	102
		2	453	453	126	126		2	491	491	58	58	
51,0	67,5	1	337	588	337	86	35	1	279	729	279	0	108
		2	514	514	160	160		2	580	580	64	64	
55,5	87,5	1	392	662	392	121	36	1	325	857	325	0	115
		2	583	583	200	200		2	679	679	74	74	
60,0	107,5	1	449	740	449	158	38	1	370	994	370	0	123
		2	654	654	243	243		2	785	785	82	82	
64,5	130,0	1	512	825	512	199	40	1	422	1144	422	0	131
		2	733	733	290	290		2	902	902	92	92	

3.3.6.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

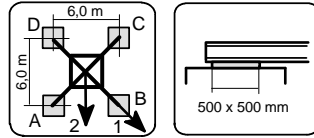


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	10,0	1	172	315	172	28	23	1	75	235	75	0	52
		2	273	273	70	70		2	199	199	38	38	
19,5	10,0	1	177	329	177	24	25	1	77	249	77	0	67
		2	284	284	69	69		2	210	210	37	37	
24,0	10,0	1	180	343	180	17	26	1	76	265	76	0	72
		2	295	295	65	65		2	228	228	102	102	
28,5	10,0	1	184	357	184	10	28	1	169	295	169	42	78
		2	307	307	60	60		2	258	258	79	79	
33,0	12,5	1	193	380	193	6	29	1	178	346	178	11	84
		2	325	325	61	61		2	297	297	60	60	
37,5	20,0	1	216	417	216	15	30	1	188	426	188	0	90
		2	358	358	73	73		2	351	351	50	50	
42,0	32,5	1	250	467	250	33	32	1	207	526	207	0	96
		2	404	404	97	97		2	421	421	49	49	
46,5	50,0	1	298	532	298	63	33	1	247	636	247	0	103
		2	463	463	132	132		2	507	507	58	58	
51,0	67,5	1	345	599	345	91	35	1	282	756	282	0	109
		2	524	524	165	165		2	597	597	63	63	
55,5	90,0	1	406	680	406	131	36	1	338	885	338	0	115
		2	600	600	211	211		2	704	704	78	78	
60,0	110,0	1	463	758	463	167	38	1	383	1025	383	0	123
		2	671	671	254	254		2	810	810	85	85	
64,5	132,5	1	526	844	526	208	40	1	433	1178	433	0	132
		2	751	751	301	301		2	927	927	94	94	

3.3.6.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

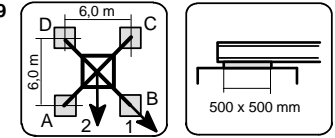


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	7,5	1	168	312	168	24	23	1	97	257	97	0	53
		2	270	270	66	66		2	204	204	22	22	
19,5	7,5	1	173	326	173	20	25	1	98	274	98	0	68
		2	281	281	65	65		2	215	215	21	21	
24,0	10,0	1	183	346	183	19	26	1	109	292	109	0	72
		2	298	298	67	67		2	236	236	99	99	
28,5	10,0	1	186	361	186	11	28	1	106	313	106	0	78
		2	310	310	62	62		2	267	267	76	76	
33,0	12,5	1	196	384	196	8	29	1	181	358	181	4	85
		2	329	329	63	63		2	306	306	56	56	
37,5	17,5	1	212	414	212	10	31	1	171	446	171	0	91
		2	355	355	69	69		2	355	355	39	39	
42,0	35,0	1	259	478	259	41	32	1	215	547	215	0	97
		2	414	414	105	105		2	438	438	51	51	
46,5	52,5	1	307	543	307	70	33	1	254	657	254	0	103
		2	474	474	139	139		2	524	524	59	59	
51,0	70,0	1	354	610	354	98	35	1	288	779	288	0	110
		2	535	535	173	173		2	614	614	63	63	
55,5	92,5	1	415	691	415	138	36	1	344	910	344	0	116
		2	610	610	219	219		2	721	721	78	78	
60,0	112,5	1	472	770	472	174	38	1	387	1052	387	0	124
		2	682	682	261	261		2	828	828	85	85	
64,5	137,5	1	541	862	541	220	40	1	449	1206	449	0	132
		2	768	768	314	314		2	953	953	100	100	

3.3.6.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on a cross frame element without climbing gear

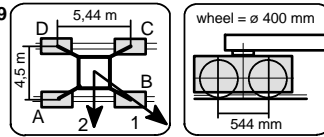


KRE 260.2 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,0	12,5	1	188	328	188	48	24	1	89	329	89	0	53
		2	287	287	89	89		2	243	243	10	10	
19,5	12,5	1	193	343	193	44	25	1	90	347	90	0	69
		2	299	299	88	88		2	254	254	9	9	
24,0	15,0	1	203	363	203	43	27	1	100	366	100	0	73
		2	316	316	90	90		2	271	271	12	12	
28,5	15,0	1	207	378	207	35	28	1	97	387	97	0	79
		2	328	328	85	85		2	296	296	87	87	
33,0	17,5	1	216	401	216	32	29	1	105	410	105	0	86
		2	347	347	86	86		2	336	336	67	67	
37,5	20,0	1	226	425	226	27	31	1	185	474	185	0	92
		2	367	367	85	85		2	379	379	43	43	
42,0	35,0	1	267	483	267	51	32	1	216	577	216	0	98
		2	419	419	115	115		2	456	456	48	48	
46,5	52,5	1	314	548	314	81	34	1	254	690	254	0	104
		2	480	480	149	149		2	543	543	55	55	
51,0	72,5	1	368	622	368	114	35	1	298	814	298	0	110
		2	547	547	188	188		2	641	641	65	65	
55,5	95,0	1	429	704	429	153	37	1	353	948	353	0	117
		2	623	623	234	234		2	749	749	78	78	
60,0	115,0	1	486	782	486	189	38	1	395	1092	395	0	125
		2	695	695	276	276		2	857	857	84	84	
64,5	140,0	1	555	876	555	235	40	1	455	1250	455	0	133
		2	782	782	329	329		2	982	982	98	98	

3.4.1.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on
undercarriage without climbing gear

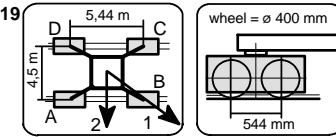


UW 250 Corner distance 4,5 m x 5,44 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	45,0	1	264	408	198	54	21	1	201	317	148	32	47		
		2	368	368	95	95		2	285	285	65	65			
20,0	45,0	1	271	424	200	47	22	1	207	330	151	28	60		
		2	381	381	90	90		2	295	295	63	63			
24,5	45,0	1	278	441	202	39	24	1	213	344	153	23	66		
		2	395	395	85	85		2	307	307	60	60			
29,0	45,0	1	285	460	204	28	25	1	220	359	155	16	72		
		2	410	410	78	78		2	326	326	133	133			

3.4.1.2 Centralballasts and Cornerloads according to DIN 15019

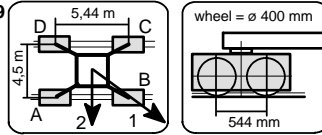
for a travelling tower crane on
undercarriage without climbing gear



UW 250 Corner distance 4,5 m x 5,44 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	40,0	1	258	394	195	59	21	1	189	305	135	19	47		
		2	355	355	98	98		2	272	272	52	52			
20,0	40,0	1	264	409	197	52	22	1	195	318	138	15	61		
		2	368	368	93	93		2	283	283	50	50			
24,5	40,0	1	271	426	199	44	24	1	201	332	141	10	66		
		2	382	382	88	88		2	295	295	47	47			
29,0	40,0	1	278	445	201	33	25	1	249	355	200	94	72		
		2	398	398	81	81		2	325	325	124	124			

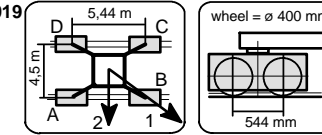
3.4.1.3 **Centralballasts and Cornerloads according to DIN 15019**
for a travelling tower crane on
undercarriage without climbing gear



UW 250 Corner distance 4,5 m x 5,44 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	40,0	1	263	405	197	55	21	1	189	306	135	19	47		
		2	365	365	95	95		2	273	273	52	52			
20,0	40,0	1	269	421	199	48	22	1	195	319	138	14	61		
		2	378	378	91	91		2	284	284	49	49			
24,5	40,0	1	276	438	201	39	24	1	201	333	140	9	67		
		2	392	392	85	85		2	303	303	144	144			
29,0	40,0	1	283	457	203	28	25	1	256	376	200	79	73		
		2	408	408	77	77		2	342	342	113	113			

3.4.1.4 **Centralballasts and Cornerloads according to DIN 15019**
for a travelling tower crane on
undercarriage without climbing gear

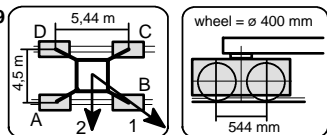


UW 250 Corner distance 4,5 m x 5,44 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	37,5	1	264	407	198	55	21	1	205	318	152	38	48		
		2	367	367	96	96		2	286	286	71	71			
20,0	37,5	1	271	424	201	48	23	1	211	333	155	33	62		
		2	380	380	91	91		2	298	298	67	67			
24,5	37,5	1	278	441	202	39	24	1	217	349	157	25	68		
		2	395	395	85	85		2	313	313	137	137			
29,0	37,5	1	285	461	204	28	25	1	259	389	199	70	74		
		2	411	411	77	77		2	352	352	106	106			

3.4.1.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

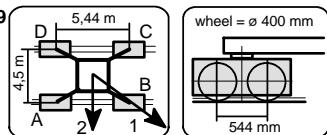


UW 250 Corner distance 4,5 m x 5,44 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	37,5	1	267	411	201	57	21	1	209	337	149	21	49		
		2	371	371	98	98	2	300	300	57	57				
20,0	37,5	1	274	427	203	50	23	1	215	351	152	15	63		
		2	384	384	93	93	2	313	313	54	54				
24,5	37,5	1	281	445	205	40	24	1	221	367	154	8	69		
		2	399	399	87	87	2	326	326	49	49				
29,0	37,5	1	288	465	206	29	26	1	264	402	200	62	75		
		2	415	415	79	79	2	363	363	101	101				

3.4.1.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

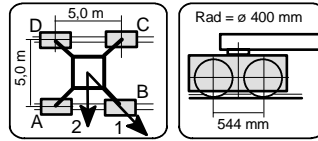


UW 250 Corner distance 4,5 m x 5,44 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	35,0	1	268	408	203	64	22	1	177	412	101	8	49		
		2	368	368	103	103	2	330	330	19	19				
20,0	37,5	1	281	431	212	62	23	1	189	433	109	8	64		
		2	388	388	104	104	2	349	349	21	21				
24,5	40,0	1	294	455	220	59	24	1	200	458	116	8	69		
		2	409	409	104	104	2	369	369	22	22				
29,0	42,5	1	307	481	227	53	26	1	210	485	121	8	75		
		2	432	432	102	102	2	396	396	109	109				

3.4.2.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on
undercarriage without climbing gear

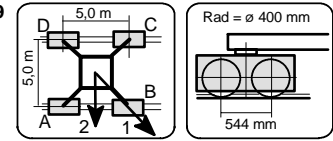


UW 250 Corner distance 5,0 m x 5,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	37,5	1	213	386	213	39	21	1	156	296	156	16	47		
		2	335	335	90	90		2	255	255	57	57			
20,0	37,5	1	217	402	217	32	22	1	160	308	160	12	60		
		2	347	347	86	86		2	265	265	56	56			
24,5	37,5	1	221	418	221	24	24	1	164	323	164	8	66		
		2	361	361	81	81		2	276	276	53	53			
29,0	37,5	1	225	437	225	14	25	1	162	344	162	8	72		
		2	375	375	76	76		2	297	297	123	123			
33,5	42,5	1	242	470	242	14	26	1	227	398	227	57	78		
		2	403	403	81	81		2	348	348	107	107			

3.4.2.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on
undercarriage without climbing gear

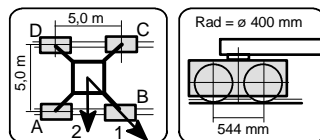


UW 250 Corner distance 5,0 m x 5,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	30,0	1	202	365	202	38	21	1	127	288	127	8	47		
		2	317	317	86	86		2	236	236	38	38			
20,0	30,0	1	206	381	206	31	22	1	127	305	127	8	61		
		2	330	330	82	82		2	247	247	36	36			
24,5	30,0	1	210	398	210	22	24	1	126	324	126	8	66		
		2	343	343	77	77		2	258	258	34	34			
29,0	30,0	1	214	416	214	12	25	1	124	345	124	8	72		
		2	357	357	71	71		2	290	290	109	109			
33,5	40,0	1	244	462	244	25	26	1	229	405	229	53	78		
		2	398	398	89	89		2	353	353	104	104			

3.4.2.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on
undercarriage without climbing gear

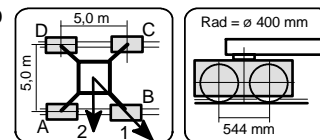


UW 250 Corner distance 5,0 m x 5,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	32,5	1	211	383	211	40	21	1	139	289	139	8	47		
		2	332	332	90	90		2	243	243	44	44			
20,0	32,5	1	215	398	215	33	22	1	139	306	139	8	61		
		2	345	345	86	86		2	253	253	42	42			
24,5	32,5	1	220	416	220	24	24	1	138	325	138	8	67		
		2	358	358	81	81		2	276	276	133	133			
29,0	32,5	1	224	435	224	13	25	1	209	354	209	64	73		
		2	373	373	75	75		2	312	312	106	106			
33,5	35,0	1	234	462	234	8	27	1	220	414	220	25	79		
		2	395	395	74	74		2	357	357	82	82			

3.4.2.4 Centralballasts and Cornerloads according to DIN 15019

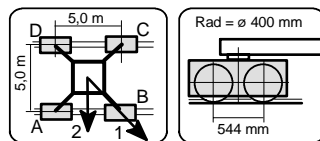
for a standing tower crane on
undercarriage without climbing gear



UW 250 Corner distance 5,0 m x 5,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads							Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	30,0	1	213	385	213	40	21	1	160	297	160	22	48		
		2	335	335	91	91		2	257	257	63	63			
20,0	30,0	1	217	401	217	33	23	1	164	311	164	17	62		
		2	347	347	87	87		2	268	268	60	60			
24,5	30,0	1	221	419	221	24	24	1	168	327	168	10	68		
		2	361	361	82	82		2	285	285	127	127			
29,0	30,0	1	226	438	226	13	25	1	211	367	211	54	74		
		2	376	376	75	75		2	321	321	100	100			
33,5	32,5	1	235	467	235	8	27	1	221	427	221	15	80		
		2	398	398	74	74		2	367	367	75	75			

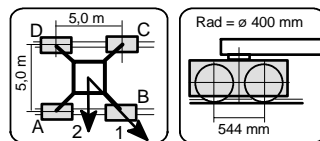
3.4.2.5 Centralballasts and Cornerloads according to DIN 15019
for a standing tower crane on
undercarriage without climbing gear



UW 250 Corner distance 5,0 m x 5,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	27,5	1	209	383	209	36	21	1	145	317	145	8	49
		2	332	332	87	87		2	263	263	45	45	
20,0	27,5	1	213	399	213	28	23	1	144	337	144	8	63
		2	344	344	82	82		2	275	275	42	42	
24,5	27,5	1	218	416	218	19	24	1	141	360	141	8	69
		2	358	358	77	77		2	289	289	117	117	
29,0	27,5	1	222	436	222	8	26	1	137	386	137	8	75
		2	373	373	71	71		2	325	325	89	89	
33,5	30,0	1	226	470	226	8	27	1	210	443	210	8	80
		2	396	396	69	69		2	371	371	64	64	

3.4.2.6 Centralballasts and Cornerloads according to DIN 15019
for a standing tower crane on
undercarriage without climbing gear

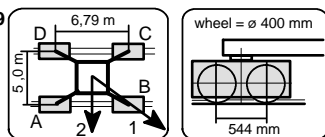


UW 250 Corner distance 5,0 m x 5,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	30,0	1	223	392	223	54	22	1	118	404	118	8	49
		2	343	343	104	104		2	302	302	22	22	
20,0	30,0	1	228	408	228	47	23	1	116	425	116	8	64
		2	355	355	100	100		2	314	314	18	18	
24,5	32,5	1	238	432	238	44	24	1	125	449	125	8	69
		2	375	375	101	101		2	332	332	21	21	
29,0	35,0	1	249	458	249	39	26	1	132	476	132	8	75
		2	397	397	100	100		2	363	363	104	104	
33,5	37,5	1	259	487	259	31	27	1	139	505	139	8	81
		2	420	420	98	98		2	410	410	78	78	

3.4.3.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

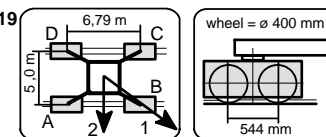


UW 260.1 Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	35,0	1	252	354	166	65	21	1	188	270	118	36	45
		2	326	326	93	93		2	247	247	59	59	
15,5	35,0	1	260	367	169	61	22	1	194	281	121	34	50
		2	337	337	91	91		2	257	257	58	58	
20,0	35,0	1	266	380	170	55	24	1	200	292	122	31	63
		2	349	349	87	87		2	267	267	56	56	
24,5	35,0	1	273	394	170	48	25	1	206	304	124	26	70
		2	361	361	82	82		2	277	277	53	53	
29,0	35,0	1	280	410	170	40	27	1	243	321	177	98	76
		2	374	374	76	76		2	300	300	120	120	
33,5	40,0	1	300	439	182	42	28	1	272	380	180	72	82
		2	400	400	81	81		2	350	350	102	102	
38,0	52,5	1	339	489	212	62	30	1	320	461	201	60	88
		2	447	447	104	104		2	422	422	99	99	
42,5	65,0	1	378	540	242	81	31	1	370	548	220	43	95
		2	495	495	126	126		2	498	498	92	92	

3.4.3.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

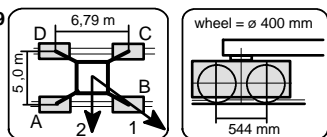


UW 260.1 Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	30,0	1	245	340	164	69	21	1	175	257	106	23	45
		2	314	314	95	95		2	235	235	46	46	
15,5	30,0	1	252	354	167	65	23	1	182	269	109	22	50
		2	326	326	93	93		2	245	245	46	46	
20,0	30,0	1	259	367	167	59	24	1	188	280	110	18	64
		2	337	337	89	89		2	254	254	43	43	
24,5	30,0	1	265	381	168	52	25	1	194	292	111	13	70
		2	349	349	84	84		2	264	264	40	40	
29,0	30,0	1	272	397	168	44	27	1	239	321	171	89	77
		2	362	362	78	78		2	298	298	112	112	
33,5	37,5	1	299	432	186	52	28	1	274	386	180	68	83
		2	395	395	89	89		2	355	355	99	99	
38,0	50,0	1	338	482	216	72	30	1	323	468	201	56	89
		2	442	442	112	112		2	428	428	96	96	
42,5	62,5	1	378	533	246	90	31	1	373	555	220	39	95
		2	490	490	133	133		2	505	505	89	89	

3.4.3.3 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

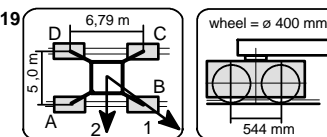


UW 260.1 Corner distance 5,0 m x 6,79 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	30,0	1	250	350	166	66	21	1	175	258	106	23	46
		2	323	323	93	93	2	235	235	46	46		
15,5	30,0	1	258	364	168	62	23	1	182	269	108	21	51
		2	334	334	91	91	2	245	245	45	45		
20,0	30,0	1	264	377	169	56	24	1	188	280	110	17	65
		2	346	346	87	87	2	255	255	43	43		
24,5	30,0	1	271	391	169	48	26	1	232	297	178	113	71
		2	358	358	82	82	2	279	279	131	131		
29,0	30,0	1	278	407	169	40	27	1	247	340	170	77	77
		2	371	371	75	75	2	314	314	103	103		
33,5	35,0	1	298	437	181	42	28	1	276	399	173	50	84
		2	398	398	80	80	2	365	365	84	84		
38,0	45,0	1	331	481	205	55	30	1	319	476	187	30	90
		2	439	439	97	97	2	432	432	73	73		
42,5	57,5	1	371	532	235	73	31	1	369	563	206	12	96
		2	488	488	118	118	2	510	510	66	66		

3.4.3.4 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

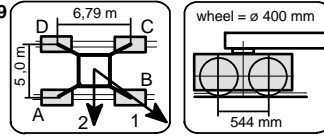


UW 260.1 Corner distance 5,0 m x 6,79 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	27,5	1	252	353	167	66	21	1	190	270	123	43	46
		2	325	325	94	94	2	248	248	65	65		
15,5	27,5	1	260	366	169	63	23	1	197	283	126	40	51
		2	337	337	92	92	2	259	259	64	64		
20,0	27,5	1	266	380	170	56	24	1	203	295	126	35	66
		2	348	348	88	88	2	269	269	60	60		
24,5	27,5	1	273	394	170	49	26	1	210	308	127	29	72
		2	361	361	82	82	2	287	287	126	126		
29,0	27,5	1	280	410	170	40	27	1	252	351	168	69	78
		2	374	374	76	76	2	323	323	97	97		
33,5	30,0	1	294	434	176	35	29	1	275	405	165	35	84
		2	395	395	74	74	2	369	369	71	71		
38,0	42,5	1	333	484	206	54	30	1	324	488	185	21	91
		2	443	443	96	96	2	443	443	66	66		
42,5	60,0	1	386	549	248	84	32	1	387	589	216	14	97
		2	504	504	130	130	2	533	533	70	70		

3.4.3.5 Centralballasts and Cornerloads according to DIN 15019

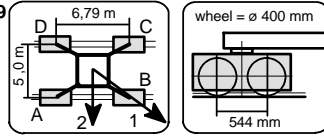
for a travelling tower crane on undercarriage without climbing gear



UW 260.1		Corner distance 5,0 m x 6,79 m						jib 50 m					
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	27,5	1	255	356	170	68	21	1	195	285	119	29	47
		2	328	328	96	96	2	260	260	54	54		
15,5	27,5	1	263	370	172	65	23	1	202	298	122	26	52
		2	340	340	94	94	2	272	272	52	52		
20,0	27,5	1	269	383	172	58	24	1	209	311	122	20	66
		2	352	352	90	90	2	282	282	49	49		
24,5	27,5	1	276	398	173	50	26	1	215	324	123	14	73
		2	364	364	84	84	2	297	297	121	121		
29,0	27,5	1	283	414	172	41	27	1	257	362	168	63	79
		2	378	378	78	78	2	333	333	92	92		
33,5	27,5	1	291	432	172	31	29	1	274	411	158	22	85
		2	393	393	70	70	2	373	373	60	60		
38,0	42,5	1	336	489	208	56	30	1	330	501	185	13	91
		2	447	447	98	98	2	454	454	61	61		
42,5	62,5	1	395	560	256	92	32	1	399	609	222	12	97
		2	514	514	137	137	2	551	551	70	70		

3.4.3.6 Centralballasts and Cornerloads according to DIN 15019

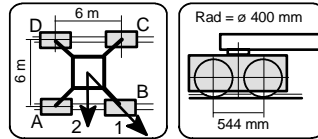
for a travelling tower crane on undercarriage without climbing gear



UW 260.1		Corner distance 5,0 m x 6,79 m						jib 55 m					
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	25,0	1	255	353	172	74	22	1	180	340	81	8	48
		2	326	326	101	101	2	286	286	18	18		
15,5	25,0	1	263	367	175	70	23	1	184	357	81	8	52
		2	338	338	99	99	2	298	298	17	17		
20,0	27,5	1	276	387	181	70	25	1	197	375	88	8	67
		2	356	356	101	101	2	315	315	19	19		
24,5	30,0	1	289	408	188	68	26	1	209	395	94	8	73
		2	375	375	101	101	2	333	333	21	21		
29,0	32,5	1	302	431	194	65	28	1	221	418	99	8	80
		2	395	395	101	101	2	365	365	101	101		
33,5	35,0	1	316	455	199	60	29	1	305	452	181	34	86
		2	417	417	99	99	2	411	411	74	74		
38,0	45,0	1	350	500	223	73	30	1	348	531	194	12	92
		2	458	458	114	114	2	480	480	62	62		
42,5	65,0	1	408	571	271	108	32	1	418	640	231	10	98
		2	526	526	154	154	2	578	578	71	71		

3.4.4.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

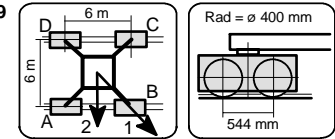


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
11,0	20,0	1	172	309	172	35	21	1	112	230	112	8	45		
		2	269	269	75	75		2	194	194	37	37			
15,5	20,0	1	177	322	177	32	22	1	116	242	116	8	50		
		2	279	279	74	74		2	203	203	37	37			
20,0	20,0	1	180	334	180	26	24	1	116	256	116	8	63		
		2	289	289	71	71		2	211	211	36	36			
24,5	20,0	1	184	348	184	20	25	1	115	271	115	8	70		
		2	300	300	68	68		2	220	220	34	34			
29,0	20,0	1	187	363	187	12	27	1	113	289	113	8	76		
		2	311	311	63	63		2	247	247	97	97			
33,5	27,5	1	210	398	210	21	28	1	195	341	195	48	82		
		2	343	343	76	76		2	298	298	91	91			
38,0	35,0	1	232	434	232	30	30	1	217	407	217	26	88		
		2	375	375	89	89		2	352	352	82	82			
42,5	45,0	1	260	478	260	43	31	1	243	487	243	8	95		
		2	414	414	106	106		2	415	415	76	76			
47,0	57,5	1	296	530	296	62	33	1	262	593	262	8	101		
		2	462	462	130	130		2	488	488	74	74			

3.4.4.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

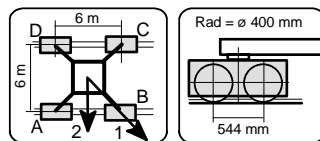


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
11,0	15,0	1	167	296	167	38	21	1	87	230	87	8	45		
		2	258	258	76	76		2	181	181	24	24			
15,5	15,0	1	172	309	172	35	23	1	90	242	90	8	50		
		2	269	269	75	75		2	191	191	25	25			
20,0	15,0	1	176	321	176	30	24	1	90	257	90	8	64		
		2	279	279	72	72		2	199	199	23	23			
24,5	15,0	1	179	335	179	23	25	1	90	272	90	8	70		
		2	289	289	69	69		2	216	216	112	112			
29,0	15,0	1	183	350	183	15	27	1	88	290	88	8	77		
		2	301	301	64	64		2	245	245	90	90			
33,5	22,5	1	205	385	205	25	28	1	190	341	190	39	83		
		2	332	332	77	77		2	296	296	83	83			
38,0	32,5	1	233	428	233	39	30	1	218	414	218	23	89		
		2	371	371	96	96		2	357	357	80	80			
42,5	42,5	1	262	472	262	52	31	1	241	498	241	8	95		
		2	410	410	113	113		2	420	420	74	74			
47,0	55,0	1	298	524	298	71	33	1	259	605	259	8	102		
		2	458	458	137	137		2	494	494	71	71			

3.4.4.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

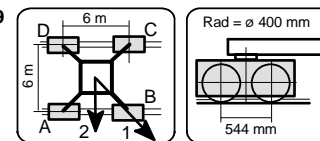


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	17,5	1	177	312	177	42	21	1	99	231	99	8	46
		2	272	272	81	81		2	188	188	30	30	
15,5	17,5	1	182	325	182	38	23	1	103	243	103	8	51
		2	283	283	80	80		2	197	197	31	31	
20,0	17,5	1	185	338	185	33	24	1	102	257	102	8	65
		2	293	293	77	77		2	208	208	133	133	
24,5	17,5	1	189	351	189	26	26	1	101	273	101	8	71
		2	304	304	74	74		2	235	235	112	112	
29,0	17,5	1	192	367	192	18	27	1	177	302	177	53	77
		2	316	316	69	69		2	265	265	89	89	
33,5	20,0	1	202	389	202	15	28	1	187	353	187	21	84
		2	334	334	69	69		2	304	304	70	70	
38,0	30,0	1	230	432	230	29	30	1	212	431	212	8	90
		2	373	373	88	88		2	365	365	66	66	
42,5	40,0	1	259	477	259	41	31	1	219	531	219	8	96
		2	413	413	105	105		2	429	429	59	59	
47,0	55,0	1	301	536	301	66	33	1	248	640	248	8	103
		2	467	467	135	135		2	510	510	62	62	

3.4.4.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

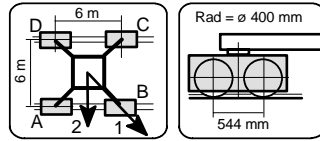


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	15,0	1	178	314	178	42	21	1	125	233	125	18	46
		2	274	274	82	82		2	201	201	49	49	
15,5	15,0	1	183	327	183	39	23	1	130	245	130	15	51
		2	285	285	81	81		2	211	211	49	49	
20,0	15,0	1	187	340	187	33	24	1	89	258	89	8	66
		2	295	295	78	78		2	221	221	47	47	
24,5	15,0	1	190	354	190	26	26	1	88	275	88	8	72
		2	306	306	74	74		2	243	243	108	108	
29,0	15,0	1	194	370	194	18	27	1	179	312	179	45	78
		2	318	318	69	69		2	273	273	84	84	
33,5	15,0	1	197	386	197	8	29	1	181	359	181	8	84
		2	331	331	63	63		2	306	306	58	58	
38,0	25,0	1	226	430	226	22	30	1	192	452	192	8	91
		2	370	370	81	81		2	368	368	54	54	
42,5	40,0	1	267	487	267	46	32	1	223	553	223	8	97
		2	423	423	111	111		2	445	445	59	59	
47,0	57,5	1	315	553	315	77	33	1	264	664	264	8	103
		2	483	483	147	147		2	532	532	68	68	

3.4.4.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

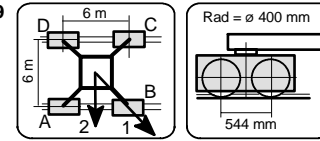


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	12,5	1	175	311	175	38	21	1	110	251	110	8	47
		2	271	271	78	78		2	206	206	33	33	
15,5	12,5	1	180	325	180	35	23	1	112	266	112	8	52
		2	282	282	77	77		2	216	216	33	33	
20,0	12,5	1	183	338	183	29	24	1	110	283	110	8	66
		2	292	292	74	74		2	225	225	31	31	
24,5	12,5	1	187	352	187	22	26	1	108	302	108	8	73
		2	303	303	70	70		2	245	245	99	99	
29,0	15,0	1	196	373	196	19	27	1	181	324	181	39	79
		2	322	322	71	71		2	282	282	81	81	
33,5	17,5	1	206	397	206	16	29	1	190	377	190	8	85
		2	341	341	72	72		2	322	322	61	61	
38,0	25,0	1	228	434	228	23	30	1	188	471	188	8	91
		2	374	374	83	83		2	377	377	50	50	
42,5	42,5	1	276	498	276	54	32	1	230	574	230	8	97
		2	433	433	119	119		2	461	461	60	60	
47,0	60,0	1	324	564	324	84	33	1	271	687	271	8	104
		2	494	494	154	154		2	549	549	69	69	

3.4.4.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

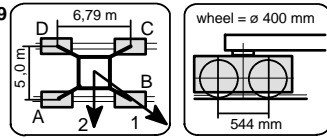


UW 260.1 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
11,0	15,0	1	189	321	189	56	22	1	89	323	89	8	48
		2	282	282	95	95		2	239	239	16	16	
15,5	15,0	1	194	335	194	53	23	1	91	339	91	8	52
		2	293	293	94	94		2	249	249	15	15	
20,0	17,5	1	203	354	203	53	25	1	102	356	102	8	67
		2	310	310	97	97		2	265	265	19	19	
24,5	17,5	1	207	368	207	46	26	1	99	375	99	8	73
		2	321	321	93	93		2	275	275	15	15	
29,0	20,0	1	217	390	217	43	28	1	108	397	108	8	80
		2	339	339	94	94		2	311	311	92	92	
33,5	22,5	1	226	414	226	39	29	1	116	421	116	8	86
		2	359	359	94	94		2	352	352	71	71	
38,0	27,5	1	242	445	242	40	30	1	201	500	201	8	92
		2	386	386	99	99		2	402	402	53	53	
42,5	42,5	1	283	503	283	64	32	1	230	605	230	8	98
		2	439	439	128	128		2	480	480	57	57	
47,0	60,0	1	332	569	332	94	33	1	270	720	270	8	105
		2	500	500	164	164		2	568	568	65	65	

3.4.5.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on
undercarriage without climbing gear

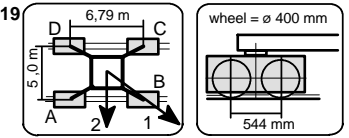


UW 260.2 Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	30,0	1	256	364	165	57	23	1	191	278	117	30	51	
		2	334	334	87	87		2	254	254	54	54		
20,0	30,0	1	264	378	167	53	25	1	198	290	120	28	65	
		2	346	346	84	84		2	264	264	53	53		
24,5	30,0	1	270	392	167	46	26	1	204	302	121	23	71	
		2	358	358	79	79		2	275	275	50	50		
29,0	30,0	1	277	407	167	37	27	1	241	320	174	94	77	
		2	371	371	73	73		2	298	298	116	116		
33,5	37,5	1	303	442	186	47	29	1	276	385	183	74	84	
		2	404	404	85	85		2	355	355	105	105		
38,0	47,5	1	336	485	210	61	30	1	318	460	198	56	90	
		2	444	444	102	102		2	420	420	96	96		
42,5	60,0	1	376	536	240	79	32	1	368	545	218	40	96	
		2	492	492	124	124		2	496	496	89	89		
47,0	75,0	1	422	595	276	103	33	1	425	642	242	26	102	
		2	547	547	151	151		2	582	582	86	86		
51,5	92,5	1	475	662	317	131	35	1	490	750	272	13	109	
		2	610	610	182	182		2	678	678	84	84		

3.4.5.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on
undercarriage without climbing gear

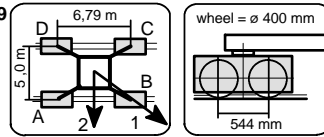


UW 260.2 Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	242	344	157	55	23	1	172	259	98	11	51	
		2	316	316	83	83		2	235	235	35	35		
20,0	22,5	1	250	358	159	50	25	1	179	272	101	8	65	
		2	328	328	80	80		2	246	246	34	34		
24,5	22,5	1	257	372	159	43	26	1	181	287	98	8	72	
		2	340	340	75	75		2	256	256	31	31		
29,0	25,0	1	270	394	165	41	28	1	237	320	168	85	78	
		2	360	360	76	76		2	297	297	108	108		
33,5	35,0	1	302	436	190	57	29	1	279	391	184	71	84	
		2	399	399	93	93		2	360	360	102	102		
38,0	45,0	1	335	479	214	70	30	1	321	466	198	53	90	
		2	439	439	110	110		2	426	426	93	93		
42,5	57,5	1	375	530	244	89	32	1	371	553	218	36	97	
		2	487	487	132	132		2	502	502	86	86		
47,0	72,5	1	421	588	280	112	33	1	429	650	242	21	103	
		2	542	542	159	159		2	589	589	82	82		
51,5	92,5	1	480	662	327	146	35	1	500	765	277	13	109	
		2	612	612	196	196		2	692	692	86	86		

3.4.5.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on
undercarriage without climbing gear

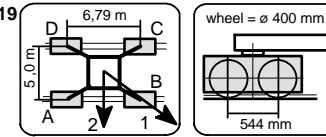


UW 260.2 Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	20,0	1	252	360	162	54	24	1	192	288	111	15	53		
		2	330	330	84	84		2	262	262	42	42			
20,0	20,0	1	260	375	164	49	25	1	200	302	114	11	68		
		2	343	343	81	81		2	274	274	40	40			
24,5	20,0	1	267	389	164	42	27	1	203	319	111	8	74		
		2	356	356	75	75		2	289	289	112	112			
29,0	20,0	1	274	405	164	33	28	1	249	355	159	53	80		
		2	369	369	69	69		2	325	325	83	83			
33,5	22,5	1	288	429	169	29	29	1	272	409	156	18	86		
		2	390	390	68	68		2	371	371	56	56			
38,0	37,5	1	334	485	206	54	31	1	327	499	182	10	93		
		2	443	443	96	96		2	451	451	58	58			
42,5	57,5	1	392	556	254	91	32	1	397	606	220	10	99		
		2	511	511	136	136		2	548	548	68	68			
47,0	80,0	1	458	635	308	131	34	1	474	725	262	11	105		
		2	586	586	180	180		2	655	655	81	81			
51,5	102,5	1	524	715	362	170	35	1	551	850	301	8	111		
		2	662	662	223	223		2	767	767	88	88			

3.4.5.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on
undercarriage without climbing gear

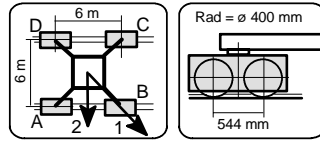


UW 260.2 Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	265	370	177	72	24	1	189	357	85	8	53		
		2	341	341	101	101		2	300	300	19	19			
20,0	22,5	1	273	385	179	67	25	1	192	376	83	8	69		
		2	354	354	98	98		2	313	313	16	16			
24,5	25,0	1	286	406	185	66	27	1	204	396	89	8	75		
		2	373	373	99	99		2	330	330	18	18			
29,0	27,5	1	300	428	191	63	28	1	216	418	94	8	81		
		2	393	393	99	99		2	363	363	98	98			
33,5	30,0	1	314	452	197	59	30	1	302	450	178	31	87		
		2	414	414	97	97		2	409	409	72	72			
38,0	40,0	1	347	496	221	72	31	1	346	528	192	9	93		
		2	455	455	113	113		2	478	478	60	60			
42,5	60,0	1	405	567	269	108	33	1	415	636	229	8	100		
		2	522	522	152	152		2	575	575	69	69			
47,0	82,5	1	471	646	323	148	34	1	493	756	271	8	106		
		2	598	598	197	197		2	683	683	81	81			

3.4.6.1 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

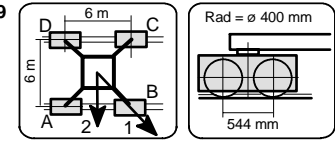


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	15,0	1	173	318	173	27	23	1	108	243	108	8	51
		2	276	276	70	70		2	199	199	33	33	
20,0	15,0	1	178	332	178	23	25	1	110	257	110	8	65
		2	287	287	69	69		2	209	209	33	33	
24,5	15,0	1	181	346	181	17	26	1	110	272	110	8	71
		2	298	298	65	65		2	218	218	31	31	
29,0	15,0	1	185	360	185	9	27	1	108	290	108	8	77
		2	309	309	61	61		2	246	246	94	94	
33,5	22,5	1	207	395	207	19	29	1	192	339	192	45	84
		2	340	340	74	74		2	296	296	88	88	
38,0	32,5	1	236	437	236	34	30	1	221	412	221	29	90
		2	378	378	93	93		2	356	356	85	85	
42,5	42,5	1	264	481	264	47	32	1	249	489	249	9	96
		2	417	417	111	111		2	418	418	80	80	
47,0	52,5	1	293	526	293	59	33	1	255	592	255	8	102
		2	458	458	127	127		2	484	484	71	71	
51,5	67,5	1	334	585	334	82	35	1	280	707	280	8	109
		2	512	512	155	155		2	566	566	71	71	
56,0	87,5	1	388	660	388	117	36	1	327	831	327	8	115
		2	580	580	196	196		2	664	664	82	82	

3.4.6.2 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

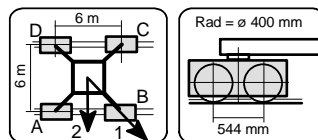


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	10,0	1	168	305	168	31	23	1	82	243	82	8	51
		2	265	265	71	71		2	187	187	21	21	
20,0	10,0	1	173	319	173	27	25	1	85	257	85	8	65
		2	276	276	70	70		2	197	197	21	21	
24,5	10,0	1	177	333	177	20	26	1	84	273	84	8	72
		2	287	287	66	66		2	214	214	109	109	
29,0	12,5	1	186	354	186	19	28	1	95	291	95	8	78
		2	305	305	68	68		2	250	250	93	93	
33,5	20,0	1	209	388	209	29	29	1	194	345	194	42	84
		2	336	336	81	81		2	301	301	86	86	
38,0	30,0	1	237	431	237	43	30	1	222	418	222	26	90
		2	374	374	100	100		2	361	361	83	83	
42,5	40,0	1	266	475	266	57	32	1	248	498	248	8	97
		2	413	413	118	118		2	424	424	77	77	
47,0	50,0	1	294	520	294	68	33	1	252	605	252	8	103
		2	454	454	134	134		2	490	490	68	68	
51,5	67,5	1	341	586	341	97	35	1	288	721	288	8	109
		2	514	514	168	168		2	579	579	74	74	
56,0	87,5	1	396	660	396	131	36	1	334	847	334	8	116
		2	583	583	209	209		2	678	678	84	84	

3.4.6.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

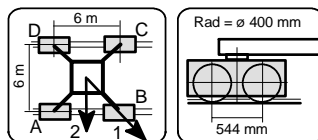


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	12,5	1	178	321	178	34	23	1	94	244	94	8	52		
		2	279	279	76	76		2	194	194	27	27			
20,0	12,5	1	183	335	183	30	25	1	97	258	97	8	66		
		2	291	291	75	75		2	206	206	129	129			
24,5	12,5	1	186	349	186	23	26	1	96	274	96	8	72		
		2	301	301	71	71		2	234	234	109	109			
29,0	12,5	1	190	364	190	16	28	1	175	300	175	49	79		
		2	313	313	67	67		2	264	264	86	86			
33,5	15,0	1	199	386	199	13	29	1	184	351	184	18	85		
		2	332	332	67	67		2	302	302	67	67			
38,0	25,0	1	228	429	228	27	31	1	206	432	206	8	91		
		2	370	370	86	86		2	363	363	63	63			
42,5	35,0	1	256	473	256	40	32	1	214	531	214	8	97		
		2	410	410	103	103		2	426	426	57	57			
47,0	52,5	1	304	538	304	70	33	1	254	639	254	8	104		
		2	469	469	138	138		2	512	512	66	66			
51,5	70,0	1	351	604	351	98	35	1	289	757	289	8	110		
		2	530	530	172	172		2	601	601	71	71			

3.4.6.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

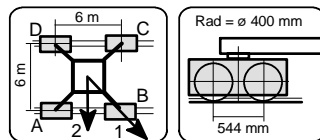


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	10,0	1	179	324	179	35	23	1	82	245	82	8	52		
		2	281	281	77	77		2	208	208	45	45			
20,0	10,0	1	184	338	184	31	25	1	84	259	84	8	67		
		2	293	293	76	76		2	219	219	44	44			
24,5	10,0	1	188	352	188	24	26	1	83	275	83	8	73		
		2	304	304	72	72		2	241	241	104	104			
29,0	10,0	1	191	367	191	16	28	1	176	311	176	42	79		
		2	315	315	67	67		2	271	271	81	81			
33,5	12,5	1	201	390	201	12	29	1	186	362	186	10	86		
		2	334	334	68	68		2	311	311	61	61			
38,0	22,5	1	230	433	230	26	31	1	199	452	199	8	92		
		2	373	373	86	86		2	372	372	57	57			
42,5	35,0	1	264	483	264	45	32	1	218	553	218	8	98		
		2	419	419	109	109		2	442	442	57	57			
47,0	52,5	1	312	548	312	75	34	1	258	663	258	8	104		
		2	479	479	144	144		2	528	528	65	65			
51,5	72,5	1	365	622	365	108	35	1	304	784	304	8	111		
		2	547	547	183	183		2	624	624	76	76			

3.4.5.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

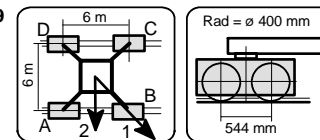


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	7,5	1	176	321	176	31	24	1	104	267	104	8	53
		2	278	278	73	73	2	212	212	29	29		
20,0	7,5	1	181	335	181	26	25	1	105	284	105	8	68
		2	290	290	71	71	2	223	223	28	28		
24,5	10,0	1	191	356	191	25	27	1	115	303	115	8	74
		2	307	307	74	74	2	250	250	101	101		
29,0	10,0	1	194	371	194	17	28	1	112	323	112	8	80
		2	319	319	69	69	2	280	280	78	78		
33,5	12,5	1	204	394	204	14	29	1	184	379	184	8	86
		2	338	338	70	70	2	320	320	58	58		
38,0	22,5	1	232	437	232	28	31	1	195	471	195	8	93
		2	377	377	88	88	2	381	381	53	53		
42,5	37,5	1	273	494	273	53	32	1	226	573	226	8	99
		2	429	429	117	117	2	458	458	58	58		
47,0	55,0	1	321	559	321	82	34	1	265	685	265	8	105
		2	489	489	152	152	2	545	545	66	66		
51,5	75,0	1	374	633	374	115	35	1	310	807	310	8	111
		2	557	557	191	191	2	642	642	76	76		

3.4.6.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

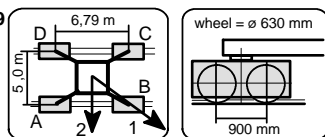


UW 260.2 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	196	337	196	55	24	1	96	339	96	8	53
		2	296	296	96	96	2	252	252	17	17		
20,0	12,5	1	201	352	201	50	25	1	97	357	97	8	69
		2	308	308	94	94	2	263	263	16	16		
24,5	15,0	1	211	372	211	49	27	1	107	376	107	8	75
		2	325	325	97	97	2	279	279	19	19		
29,0	15,0	1	214	388	214	41	28	1	103	397	103	8	81
		2	337	337	92	92	2	310	310	89	89		
33,5	17,5	1	224	411	224	37	30	1	111	421	111	8	87
		2	356	356	92	92	2	350	350	68	68		
38,0	22,5	1	240	441	240	39	31	1	196	500	196	8	93
		2	382	382	98	98	2	399	399	51	51		
42,5	40,0	1	287	505	287	69	33	1	239	604	239	8	100
		2	441	441	133	133	2	483	483	62	62		
47,0	57,5	1	335	571	335	98	34	1	276	718	276	8	106
		2	502	502	167	167	2	571	571	69	69		
51,5	77,5	1	388	645	388	131	35	1	321	843	321	8	112
		2	570	570	206	206	2	668	668	78	78		

3.4.7.1 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

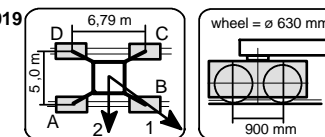


UW 260.3 Corner distance 5,0 m x 6,79 m **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	30,0	1	264	371	173	65	23	1	198	285	125	38	51
		2	342	342	95	95		2	261	261	62	62	
20,0	30,0	1	271	386	175	60	25	1	205	298	128	35	65
		2	354	354	92	92		2	272	272	61	61	
24,5	30,0	1	278	400	175	53	26	1	211	309	129	31	71
		2	366	366	87	87		2	282	282	58	58	
29,0	30,0	1	285	415	175	45	27	1	249	328	182	102	77
		2	379	379	81	81		2	306	306	124	124	
33,5	37,5	1	311	450	194	54	29	1	283	393	191	82	84
		2	412	412	93	93		2	362	362	112	112	
38,0	47,5	1	344	493	218	68	30	1	326	468	206	64	90
		2	452	452	110	110		2	428	428	103	103	
42,5	60,0	1	383	544	248	87	32	1	376	553	226	48	96
		2	499	499	132	132		2	504	504	97	97	
47,0	75,0	1	430	603	284	111	33	1	433	650	250	34	102
		2	555	555	158	158		2	590	590	94	94	
51,5	92,5	1	483	669	325	138	35	1	498	757	279	20	109
		2	618	618	190	190		2	686	686	92	92	
56,0	115,0	1	549	751	380	179	36	1	578	884	321	16	115
		2	695	695	234	234		2	799	799	100	100	

3.4.7.2 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

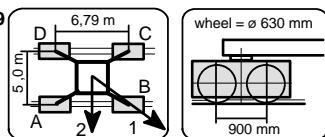


UW 260.3 Corner distance 5,0 m x 6,79 m **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	22,5	1	250	352	164	63	23	1	180	267	106	19	51
		2	323	323	91	91		2	243	243	43	43	
20,0	22,5	1	258	366	166	58	25	1	187	279	109	16	65
		2	336	336	88	88		2	254	254	42	42	
24,5	22,5	1	264	380	167	51	26	1	189	295	106	16	72
		2	348	348	83	83		2	264	264	39	39	
29,0	25,0	1	278	402	173	49	28	1	245	327	176	93	78
		2	367	367	83	83		2	305	305	116	116	
33,5	35,0	1	310	443	198	64	29	1	286	399	191	79	84
		2	406	406	101	101		2	368	368	110	110	
38,0	45,0	1	343	486	222	78	30	1	329	474	206	60	90
		2	447	447	118	118		2	434	434	101	101	
42,5	57,5	1	382	537	252	97	32	1	379	560	225	44	97
		2	494	494	140	140		2	510	510	94	94	
47,0	72,5	1	429	596	287	120	33	1	436	658	250	29	103
		2	550	550	166	166		2	596	596	90	90	
51,5	92,5	1	488	670	335	154	35	1	508	772	285	21	109
		2	619	619	204	204		2	699	699	94	94	
56,0	115,0	1	555	751	390	194	36	1	588	900	326	16	116
		2	697	697	248	248		2	814	814	101	101	

3.4.7.3 Centralballasts and Cornerloads according to DIN 15019

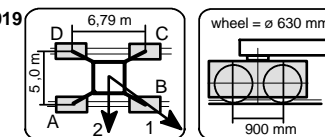
for a travelling tower crane on undercarriage without climbing gear



UW 260.3		Corner distance 5,0 m x 6,79 m								jib 40 m				
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	25,0	1	262	368	172	66	23	1	186	274	112	25	52	
		2	339	339	95	95	2	249	249	49	49			
20,0	25,0	1	269	383	174	61	25	1	193	286	115	22	66	
		2	351	351	92	92	2	260	260	48	48			
24,5	25,0	1	276	397	174	54	26	1	238	303	183	117	72	
		2	363	363	87	87	2	285	285	135	135			
29,0	25,0	1	283	412	174	45	28	1	253	346	174	81	79	
		2	377	377	81	81	2	320	320	107	107			
33,5	30,0	1	303	442	186	48	29	1	282	405	178	54	85	
		2	403	403	86	86	2	371	371	88	88			
38,0	40,0	1	336	485	210	61	31	1	325	482	192	35	91	
		2	444	444	103	103	2	438	438	78	78			
42,5	55,0	1	382	543	246	86	32	1	381	575	217	24	97	
		2	498	498	130	130	2	521	521	77	77			
47,0	75,0	1	441	614	295	121	33	1	451	685	254	20	104	
		2	566	566	169	169	2	621	621	85	85			
51,5	97,5	1	507	694	348	161	35	1	530	808	295	17	110	
		2	642	642	213	213	2	731	731	94	94			
56,0	122,5	1	580	783	409	206	36	1	617	942	342	17	116	
		2	727	727	262	262	2	852	852	107	107			

3.4.7.4 Centralballasts and Cornerloads according to DIN 15019

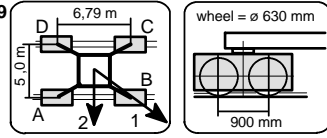
for a travelling tower crane on undercarriage without climbing gear



UW 260.3		Corner distance 5,0 m x 6,79 m								jib 45 m				
Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]	
			Cornerloads						Cornerloads					
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]		
15,5	22,5	1	263	370	173	66	23	1	201	287	129	44	52	
		2	341	341	96	96	2	263	263	68	68			
20,0	22,5	1	271	385	175	61	25	1	209	300	132	40	67	
		2	354	354	93	93	2	275	275	65	65			
24,5	22,5	1	278	400	175	54	26	1	242	314	182	110	73	
		2	366	366	88	88	2	294	294	130	130			
29,0	22,5	1	285	415	175	45	28	1	257	357	173	73	79	
		2	379	379	81	81	2	329	329	101	101			
33,5	25,0	1	299	439	181	41	29	1	280	411	170	39	86	
		2	400	400	80	80	2	375	375	75	75			
38,0	37,5	1	338	489	211	61	31	1	329	494	190	26	92	
		2	447	447	102	102	2	448	448	71	71			
42,5	55,0	1	391	553	253	91	32	1	392	594	222	20	98	
		2	508	508	136	136	2	538	538	76	76			
47,0	75,0	1	450	625	301	126	34	1	463	706	258	16	104	
		2	577	577	174	174	2	639	639	82	82			
51,5	100,0	1	522	712	361	171	35	1	548	835	305	18	111	
		2	659	659	224	224	2	756	756	97	97			
56,0	125,0	1	595	801	422	216	37	1	635	971	352	16	117	
		2	744	744	273	273	2	878	878	109	109			

3.4.7.5 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

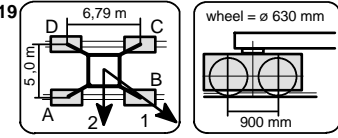


UW 260.3 Corner distance 5,0 m x 6,79 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	20,0	1	260	368	169	62	24	1	200	296	119	23	53
		2	338	338	92	92		2	270	270	50	50	
20,0	20,0	1	268	383	171	57	25	1	208	310	121	19	68
		2	351	351	89	89		2	282	282	47	47	
24,5	20,0	1	275	397	172	49	27	1	211	326	119	16	74
		2	363	363	83	83		2	297	297	119	119	
29,0	20,0	1	282	413	171	41	28	1	257	363	167	61	80
		2	377	377	77	77		2	333	333	90	90	
33,5	22,5	1	296	437	177	36	29	1	279	417	164	26	86
		2	398	398	75	75		2	379	379	64	64	
38,0	37,5	1	341	493	214	62	31	1	335	507	190	18	93
		2	451	451	104	104		2	459	459	66	66	
42,5	57,5	1	400	564	262	98	32	1	404	614	228	18	99
		2	518	518	144	144		2	556	556	76	76	
47,0	80,0	1	465	642	316	139	34	1	482	733	270	19	105
		2	593	593	188	188		2	663	663	88	88	
51,5	102,5	1	531	723	370	178	35	1	559	858	309	16	111
		2	670	670	231	231		2	775	775	96	96	
56,0	127,5	1	605	812	430	223	37	1	644	998	353	16	118
		2	755	755	280	280		2	898	898	107	107	

3.4.7.6 Centralballasts and Cornerloads according to DIN 15019

for a travelling tower crane on undercarriage without climbing gear

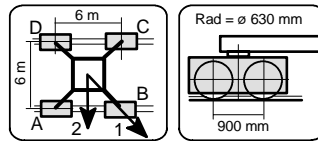


UW 260.3 Corner distance 5,0 m x 6,79 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	22,5	1	273	378	185	80	24	1	196	365	93	16	53
		2	349	349	109	109		2	308	308	27	27	
20,0	22,5	1	281	393	187	75	25	1	200	383	91	16	69
		2	362	362	106	106		2	320	320	24	24	
24,5	25,0	1	294	414	193	74	27	1	212	403	97	16	75
		2	380	380	107	107		2	338	338	26	26	
29,0	27,5	1	307	436	199	71	28	1	224	426	102	16	81
		2	400	400	106	106		2	371	371	106	106	
33,5	30,0	1	321	460	205	66	30	1	310	458	186	38	87
		2	421	421	105	105		2	417	417	79	79	
38,0	40,0	1	355	504	229	79	31	1	354	536	200	17	93
		2	462	462	121	121		2	485	485	68	68	
42,5	60,0	1	413	575	277	115	33	1	423	644	237	16	100
		2	530	530	160	160		2	583	583	77	77	
47,0	82,5	1	479	654	331	156	34	1	501	764	279	16	106
		2	605	605	204	204		2	691	691	89	89	
51,5	105,0	1	545	735	384	194	35	1	574	896	313	16	112
		2	682	682	247	247		2	804	804	95	95	
56,0	132,5	1	625	831	451	245	37	1	671	1038	367	16	119
		2	774	774	302	302		2	934	934	111	111	

3.3.8.1 **Centralballasts and Cornerloads according to DIN 15019**

for a standing tower crane on undercarriage without climbing gear

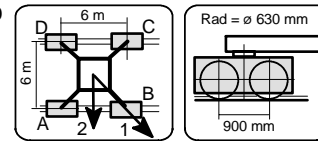


UW 260.3 **Corner distance 6,0 m x 6,0 m** **jib 30 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	15,0	1	181	326	181	35	23	1	115	250	115	16	51		
		2	283	283	78	78		2	207	207	41	41			
20,0	15,0	1	186	340	186	31	25	1	118	265	118	16	65		
		2	295	295	76	76		2	217	217	41	41			
24,5	15,0	1	189	353	189	25	26	1	117	280	117	16	71		
		2	305	305	73	73		2	226	226	39	39			
29,0	15,0	1	193	368	193	17	27	1	116	297	116	16	77		
		2	317	317	68	68		2	253	253	102	102			
33,5	22,5	1	215	403	215	27	29	1	200	347	200	52	84		
		2	348	348	82	82		2	304	304	96	96			
38,0	32,5	1	243	445	243	42	30	1	228	420	228	37	90		
		2	386	386	101	101		2	364	364	93	93			
42,5	42,5	1	272	488	272	55	32	1	257	496	257	17	96		
		2	425	425	119	119		2	426	426	87	87			
47,0	52,5	1	300	534	300	67	33	1	263	600	263	16	102		
		2	465	465	135	135		2	492	492	79	79			
51,5	67,5	1	341	593	341	89	35	1	287	715	287	16	109		
		2	519	519	163	163		2	574	574	79	79			
56,0	87,5	1	396	667	396	124	36	1	334	839	334	16	115		
		2	588	588	204	204		2	672	672	90	90			
60,5	107,5	1	453	744	453	161	38	1	381	975	381	16	123		
		2	659	659	247	247		2	777	777	99	99			

3.3.8.2 **Centralballasts and Cornerloads according to DIN 15019**

for a standing tower crane on undercarriage without climbing gear

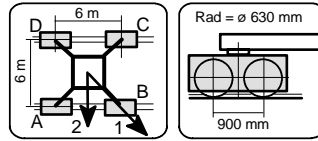


UW 260.3 **Corner distance 6,0 m x 6,0 m** **jib 35 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm					Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm					Horizontal force [kN]
			Cornerloads				Horizontal force [kN]			Cornerloads				Horizontal force [kN]	
			A [kN]	B [kN]	C [kN]	D [kN]				A [kN]	B [kN]	C [kN]	D [kN]		
15,5	10,0	1	176	313	176	39	23	1	90	251	90	16	51		
		2	273	273	79	79		2	195	195	28	28			
20,0	10,0	1	181	327	181	35	25	1	93	265	93	16	65		
		2	284	284	77	77		2	205	205	28	28			
24,5	10,0	1	184	341	184	28	26	1	92	281	92	16	72		
		2	295	295	74	74		2	222	222	117	117			
29,0	12,5	1	194	361	194	27	28	1	103	298	103	16	78		
		2	312	312	76	76		2	258	258	100	100			
33,5	20,0	1	216	396	216	36	29	1	201	353	201	50	84		
		2	343	343	89	89		2	309	309	94	94			
38,0	30,0	1	245	439	245	51	30	1	230	426	230	34	90		
		2	382	382	108	108		2	369	369	91	91			
42,5	40,0	1	273	482	273	64	32	1	256	506	256	16	97		
		2	421	421	126	126		2	432	432	85	85			
47,0	50,0	1	302	528	302	76	33	1	260	612	260	16	103		
		2	462	462	142	142		2	498	498	76	76			
51,5	67,5	1	349	594	349	104	35	1	296	729	296	16	109		
		2	522	522	176	176		2	586	586	82	82			
56,0	87,5	1	404	668	404	139	36	1	342	855	342	16	116		
		2	591	591	217	217		2	685	685	92	92			
60,5	107,5	1	461	746	461	176	38	1	387	993	387	16	124		
		2	662	662	259	259		2	791	791	100	100			

3.3.8.3 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

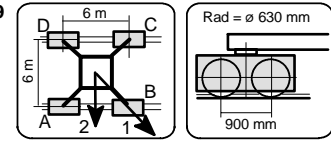


UW 260.3 Corner distance 6,0 m x 6,0 m **jib 40 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	186	329	186	42	23	1	102	252	102	16	52
		2	287	287	84	84		2	201	201	34	34	
20,0	12,5	1	190	343	190	38	25	1	105	266	105	16	66
		2	298	298	83	83		2	214	214	137	137	
24,5	12,5	1	194	357	194	31	26	1	104	282	104	16	72
		2	309	309	79	79		2	241	241	117	117	
29,0	12,5	1	197	372	197	23	28	1	182	308	182	57	79
		2	321	321	74	74		2	271	271	94	94	
33,5	15,0	1	207	394	207	20	29	1	192	359	192	25	85
		2	339	339	75	75		2	310	310	74	74	
38,0	25,0	1	236	437	236	35	31	1	214	439	214	16	91
		2	378	378	94	94		2	371	371	71	71	
42,5	35,0	1	264	481	264	48	32	1	221	538	221	16	97
		2	417	417	111	111		2	434	434	64	64	
47,0	52,5	1	311	546	311	77	33	1	262	647	262	16	104
		2	477	477	146	146		2	520	520	73	73	
51,5	70,0	1	359	612	359	105	35	1	297	765	297	16	110
		2	538	538	180	180		2	609	609	79	79	
56,0	90,0	1	413	687	413	140	36	1	342	893	342	16	116
		2	607	607	220	220		2	709	709	88	88	
60,5	112,5	1	477	771	477	182	38	1	399	1033	399	16	125
		2	685	685	269	269		2	821	821	102	102	

3.3.8.4 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

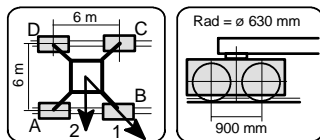


UW 260.3 Corner distance 6,0 m x 6,0 m **jib 45 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	10,0	1	187	331	187	43	23	1	89	252	89	16	52
		2	289	289	85	85		2	216	216	53	53	
20,0	10,0	1	192	346	192	38	25	1	92	267	92	16	67
		2	301	301	83	83		2	226	226	52	52	
24,5	10,0	1	196	360	196	31	26	1	91	283	91	16	73
		2	312	312	79	79		2	249	249	112	112	
29,0	10,0	1	199	375	199	23	28	1	184	319	184	49	79
		2	323	323	75	75		2	279	279	89	89	
33,5	12,5	1	209	397	209	20	29	1	194	370	194	17	86
		2	342	342	75	75		2	318	318	69	69	
38,0	22,5	1	237	440	237	34	31	1	207	460	207	16	92
		2	381	381	94	94		2	379	379	65	65	
42,5	35,0	1	272	491	272	53	32	1	226	561	226	16	98
		2	427	427	117	117		2	450	450	64	64	
47,0	52,5	1	319	556	319	82	34	1	265	671	265	16	104
		2	487	487	152	152		2	536	536	73	73	
51,5	72,5	1	373	629	373	116	35	1	312	792	312	16	111
		2	554	554	191	191		2	632	632	83	83	
56,0	92,5	1	427	705	427	150	37	1	356	922	356	16	117
		2	623	623	231	231		2	733	733	92	92	
60,5	115,0	1	491	789	491	192	39	1	411	1064	411	16	125
		2	702	702	279	279		2	846	846	105	105	

3.3.8.5 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear

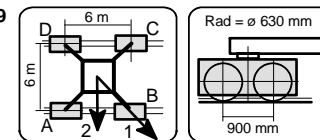


UW 260.3 Corner distance 6,0 m x 6,0 m **jib 50 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	7,5	1	184	329	184	38	24	1	111	275	111	16	53
		2	286	286	81	81		2	220	220	37	37	
20,0	7,5	1	189	343	189	34	25	1	113	292	113	16	68
		2	298	298	79	79		2	231	231	36	36	
24,5	10,0	1	198	363	198	33	27	1	123	310	123	16	74
		2	315	315	82	82		2	257	257	109	109	
29,0	10,0	1	202	378	202	25	28	1	120	331	120	16	80
		2	327	327	77	77		2	288	288	86	86	
33,5	12,5	1	212	401	212	22	29	1	192	386	192	16	86
		2	346	346	77	77		2	328	328	65	65	
38,0	22,5	1	240	444	240	36	31	1	203	479	203	16	93
		2	385	385	95	95		2	389	389	61	61	
42,5	37,5	1	281	502	281	60	32	1	234	581	234	16	99
		2	437	437	125	125		2	466	466	66	66	
47,0	55,0	1	328	567	328	90	34	1	272	693	272	16	105
		2	497	497	159	159		2	553	553	74	74	
51,5	75,0	1	382	641	382	123	35	1	318	815	318	16	111
		2	565	565	199	199		2	649	649	84	84	
56,0	95,0	1	436	716	436	156	37	1	361	947	361	16	118
		2	634	634	238	238		2	751	751	92	92	
60,5	117,5	1	500	801	500	198	39	1	416	1091	416	16	126
		2	713	713	287	287		2	865	865	104	104	

3.3.8.6 Centralballasts and Cornerloads according to DIN 15019

for a standing tower crane on undercarriage without climbing gear



UW 260.3 Corner distance 6,0 m x 6,0 m **jib 55 m**

Height under hook [m]	Centerballasts [t]	Jib position	Crane in service torque moment: 190 kNm				Horizontal force [kN]	Jib position	Crane out of service torque moment: 0 kNm				Horizontal force [kN]
			Cornerloads						Cornerloads				
			A [kN]	B [kN]	C [kN]	D [kN]			A [kN]	B [kN]	C [kN]	D [kN]	
15,5	12,5	1	204	345	204	63	24	1	103	347	103	16	53
		2	304	304	104	104		2	260	260	25	25	
20,0	12,5	1	209	360	209	58	25	1	105	365	105	16	69
		2	315	315	102	102		2	271	271	24	24	
24,5	15,0	1	219	380	219	57	27	1	114	384	114	16	75
		2	333	333	104	104		2	287	287	27	27	
29,0	15,0	1	222	395	222	49	28	1	111	405	111	16	81
		2	345	345	100	100		2	317	317	97	97	
33,5	17,5	1	232	418	232	45	30	1	119	428	119	16	87
		2	364	364	100	100		2	357	357	76	76	
38,0	22,5	1	248	449	248	46	31	1	204	508	204	16	93
		2	390	390	105	105		2	407	407	59	59	
42,5	40,0	1	295	513	295	77	33	1	247	612	247	16	100
		2	449	449	141	141		2	491	491	69	69	
47,0	57,5	1	342	579	342	106	34	1	284	725	284	16	106
		2	509	509	175	175		2	578	578	76	76	
51,5	77,5	1	396	653	396	139	35	1	329	851	329	16	112
		2	577	577	214	214		2	676	676	86	86	
56,0	97,5	1	450	729	450	172	37	1	370	986	370	16	119
		2	647	647	254	254		2	778	778	92	92	
60,5	120,0	1	514	814	514	214	39	1	424	1132	424	16	127
		2	726	726	301	301		2	893	893	104	104	